ORDER NO. MD0602043C2

Service Manual

CD Stereo System

SA-PM53E / SA-PM53EB / SA-PM53EG

Colour

(S)... Silver Type

SPECIFICATIONS

Specification

■ **Amplifier Section**

RMS OUTPUT POWER both channel driven	
10% Total harmonic distortion	
1 kHz	**50 W per channel (6)**
Total Bi-Amp power	**90 W per channel**
Input Impedance	
Aux	**250 mV 12k**
Output Impedance	
Headphone	**16 to 32**
Phone jack	
Terminal	**Stereo, 3.5 mm**
AUX jack (Music port)	
Terminal	**Stereo, 3.5 mm**

■ **FM Tuner Section**

Frequency range	**87.50 MHz to 108.00 MHz / (50 kHz steps)**
Sensitivity	**0.3 V (IHF)**
S/N 26dB	**0.2 V**
Antenna terminals	**75 (unbalanced)**
Preset stations	**FM 15 stations**
	AM 15 stations

■ **AM Tuner Section**

Frequency range	**522 kHz to 1629 kHz / (9kHz steps)**
	520 kHz to 1630 kHz / (10kHz steps)
Sensitivity	
S/N 20 dB (at 999 kHz)	**900 V/m**

■ **Cassette Deck Section**

Track system	**4-track, 2-channel**
Heads	
Record/playback	**Solid permalloy head**
Erasure	**Double gap ferrite head**
Motor	**DC servo motor**
Recording system	**AC bias 100 kHz**
Erase system	**AC erase 100 kHz**
Tape speed	**4.8 cm/s**
Overall frequency response (+3, -6 dB at DECK OUT)	
NORMAL	**35 Hz to 14 kHz**
S/N RATIO	**54 dB (A weighted)**
Wow and flutter	**0.08% (WRMS)**
Fast forward and rewind time	**Approx. 120 seconds with C-60 cassette tape**

CD Section

Disc played [8 cm or 12 cm]	
(1) CD-Audio (CD-DA)	
(2) CD-R/RW (CD-DA, MP3 formatted disc)	
(3) MP3	
Sampling frequency	
CD	**44.1 kHz**
MP3	**32 kHz, 44.1 kHz, 48 kHz**

Bit rate	
MP3	32 kbps to 384 kbps
Decoding	16/20/24 bit linear
Pickup	
Wavelength	785 nm
Beam source	Semiconductor laser
Laser power	CLASS 1
Audio output (Disc)	
Number of channels	2-Channel
Frequency response	20 Hz to 20 kHz (+1dB, -2 dB)
Wow and flutter	Below measurable limit
Digital filter	8 fs
D/A converter	MASH (1 bit DAC)
■ General	
Power supply	AC 230 V, 50 Hz (For E, EG)
	AC 230-240 V, 50 Hz (For EB)
Power consumption	125 W
Dimensions (W x H x D)	175 mm x 249 mm x 355 mm
Mass	5.4 kg
Operating temperature range	+5°C to +35°C
Operating humidity range	5% to 90% RH (no condensation)
Power consumption in standby mode	0.6 W

Notes :

1. Specifications are subject to change without notices. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.
3. The labels “HIGH” and “LOW” on the rear or the speakers refer to High frequency and Low frequency.

■ System : SC-PM53E-S	Music center: SA-PM53E-S
	Speaker: SB-PM53EG-MJ
System : SC-PM53EB-S	Music center: SA-PM53EB-S
	Speaker: SB-PM53EG-MJ
System : SC-PM53EG-S	Music center: SA-PM53EG-S
	Speaker: SB-PM53EG-MJ

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1. Safety Precautions

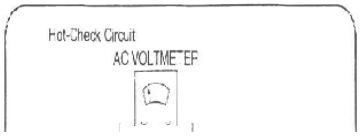
1.1. GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, ensure that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, check for leakage current checks to prevent from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Using an ohmmeter measure the resistance value, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M Ω and 5.2 Ω . / When the exposed metal does not have a return path to the chassis, the reading must be .

Figure. 1



1.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k , 10 watts resistor, in parallel with a 0.15 F capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above

measurements.

6. **The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. should the measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and re-checked before it is returned to the customer.**

1.2. Caution for AC Cord

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

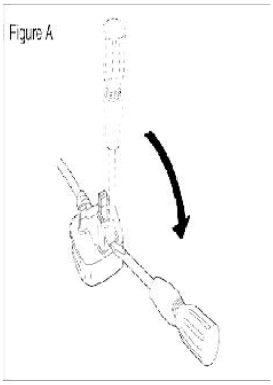
CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A



1.3. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C512, C513, C514, C606, C608, C610, C624 through a 10 Ω, 1W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

- **Current consumption at AC 230V, 50 Hz in NO SIGNAL mode should be ~300 mA (E/EG).**
- **Current consumption at AC 230V-240V, 50 Hz in NO SIGNAL mode should be ~300 mA (EB).**

1.4. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- **No sound is heard when the power is turned on.**
- **Sound stops during a performance.**

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.
If this occurs, follow the procedure outlines below:

1. **Turn off the power.**
2. **Determine the cause of the problem and correct it.**
3. **Turn on the power once again after one minute.**

Note:
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

2. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.**

3. **Use only a grounded-tip soldering iron to solder or unsolder ES devices.**
4. **Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static (ESD protected)” can generate electrical charge to damage ES devices.**
5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or comparable conductive material).**
7. **Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.**
   Caution
   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. **Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).**

3. Precaution of Laser Diode

Caution :

This product utilizes a laser diode with the unit turned "ON", invisible laser radiation is emitted from the pick up lens. / Wavelength : 780 nm / Maximum output radiation power from pick up : 100 W/VDE / Laser radiation from pick up unit is safety level, but be sure the followings:

1. **Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick up unit. It was already adjusted.**

3. Do not look at the focus lens using optical instruments.

4. Recommend not to look at pick up lens for a long time.

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt. / Wellenlänge : 780nm / Maximale Strahlungsleistung der Lasereinheit : 100 μ W/VDE / Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlinse blicken.
4. Nicht über längere Zeit in die Fokussierlinse blicken.

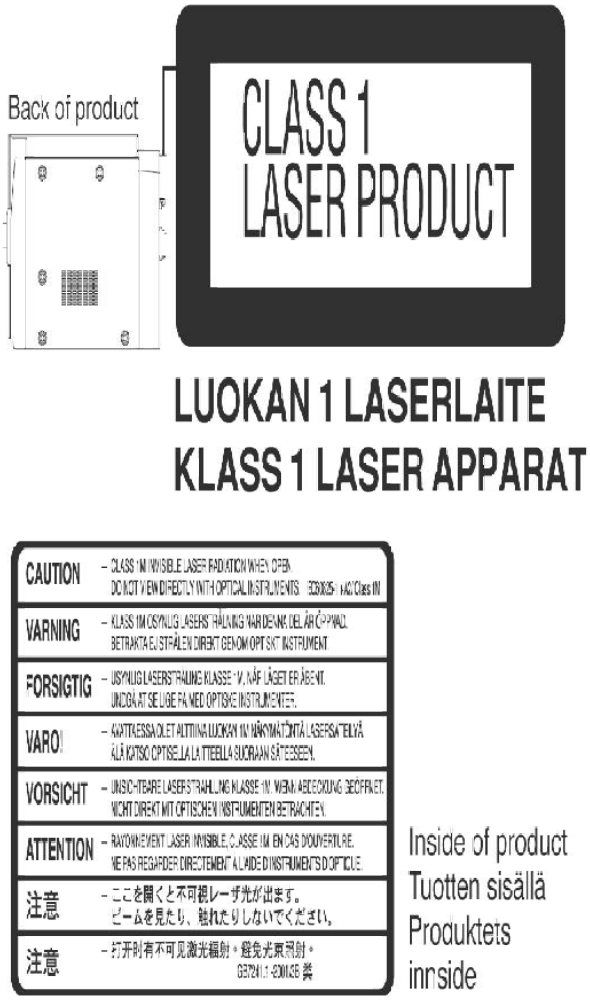
ADVARSEL :

I dette a apparat anvendes laser.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

Use of Caution Labels



4. Handling Precautions For Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body. So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

- Handling of traverse deck (optical pickup)

1. **Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.**
2. **To prevent the breakdown of the laser diode, an antistatic shorting pin is inserted into the flexible board (FFC board).**
3. **Take care not to apply excessive stress to the flexible board (FFC board). When removing or connecting the short pin, finish the job in as short time as possible. (Fig 4.1)**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted.**

- Grounding for electrostatic breakdown prevention

1. **Work table grounding. (Fig 4.2) / Use the anti-static wrist strap to discharge the static electricity from your body.**

2. Work table grounding. (Fig 4.2) / Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is place, and ground the sheet.

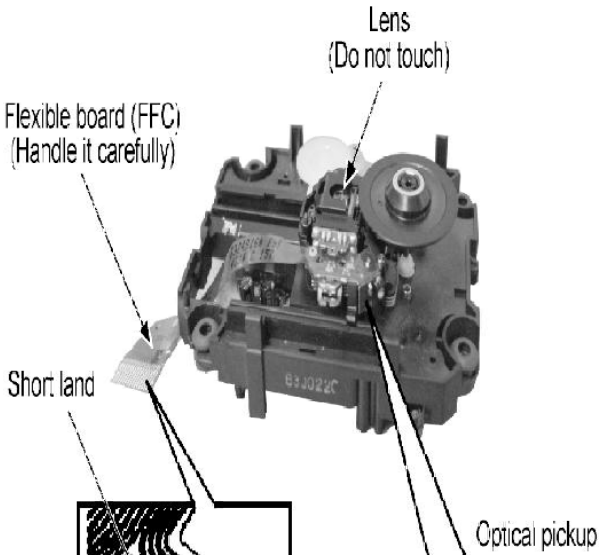
Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).

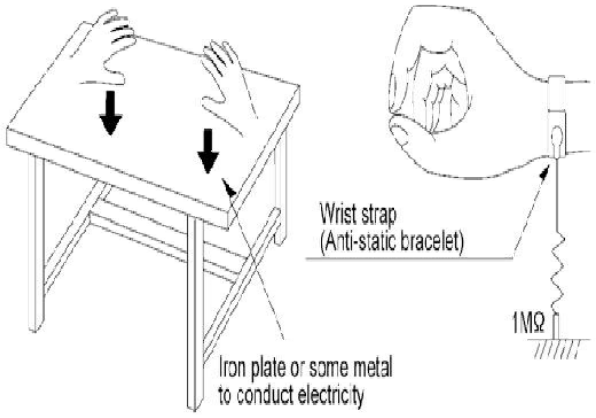
Caution when replacing the Traverse Deck

The traverse deck has a short point shorted with solder to protect the laser diode against electrostatics breakdown. Be sure to remove the solder from the short point before making connections.

(Fig 4.1)



(Figs 4.2)



5. Handling the Lead-free Solder

5.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).

- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).

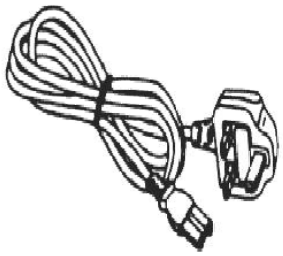
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

6. Accessories

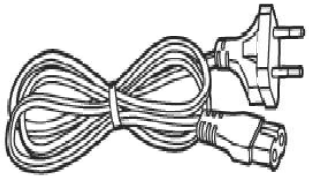
Note : Refer to Packing Materials & Accessories Parts List (Section 23) for the part number.

Remote Control

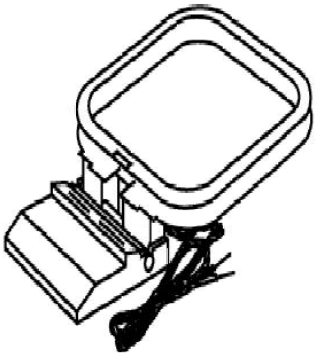
AC Power Cord / (For EB)



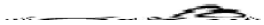
AC Power Cord / (For E/EG)



AM Loop Antenna



FM Antenna



FM Antenna (For EB)

7. Operating Instructions Procedures

7.1. Main Unit & Remote Control Operation

7.2. Disc Information

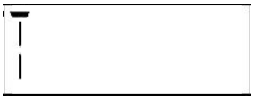
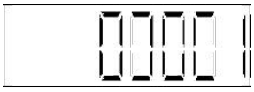
8. Self-Diagnosis & Special Mode Setting

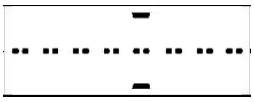
This unit is equipped with features of self-diagnostic & special mode setting for checking the functions & reliability.

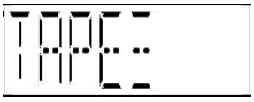
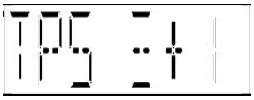
Special Note : Checking of the reliability (ageing) & changer operation must be carry out to ensure good working condition in unit.

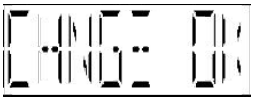
8.1. Special Mode Table

Below is the various special modes for checking:-

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self - Diagnostic Mode	To enter into self diagnostic checking for main unit.		1. Select [ ] for TAPE mode (Ensure no tape is inserted). 2. Press and hold [button for 3 seconds follow by [ ]. To exit, press button on main unit or remote control.
CD Changer Reliability Test	To determine the reliability of CD Changer Unit. (For more information, refer to section 8.1.2)		In doctor Mode: 1. Press [2] button on remote control.. To exit, press button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Doctor Mode	To enter into Doctor Mode for checking of various items and displaying EEPROM and firmware version. (For more information, refer to section 8.1.3) Note: The micro-processor version as shown is an example. It will be revise when there is an updates.	1. 2. 1. The Check Sum of EEPROM and firmware version will be display for 1 sec. * ROM correction ** Firmware version No:	In any mode: 1. Press [ ] butto on main unit follow by [4] and [7] on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
Cold Start	To activate cold start ipon next AC power up.	 Note: This test do not work when selector is in Tuner.	In doctor mode: 1. Press [4] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
FL Display Test	To check the FL segments display (All segments will light up)		In doctor mode: 1. Press [DIMMER] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
CD to TAPE Recording Test Mode	To Inspect the recording process from CD to TAPE for the unit (For more information, refer to section 8.1.4)		In doctor mode: 1. Set to CD mode 2. Press [5] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Tape Recording and Playing	To Inspect the Tape recording and playing is process for unit. (For more information, refer to section 8.1.5)		In doctor mode: 1. Press [6] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
Volume Setting	To Forced Volume Setting. -BASS TREBLE set to 0dB. -H.BASS is off.	1. 2. 3.	In doctor mode: 1. Press [7] button on remote control. 2. Press [8] button on remote control. 3. Press [9] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
TPS	To check FF TPS for deck. (For more information, refer to section 8.1.6)		In doctor mode: 1. Press [button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.
CD Tray and Tape Door Open	To check CD Tray and Tape Door Open. -BASS TREBLE set to 0dB. -H.BASS is off. -CD tray and Cassette cover shall open simultaneously.		In doctor mode: 1. Press [1] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Changer Operation	To check the CD Changer Operation. (For more information, refer to section 8.1.7) 1. Tray 1 load, tray 2 open then close. 2. Tray 1 load, tray 3 open then close. 3. Tray 1 load, tray 4 open then close. 4. Tray 1 load, tray 5 open then close. 5. CD check mode and then close. 6. Tray 1 load. 7. After the above process, [CHNGR_OK] shall be displayed. If there is no problems. Error codes will display if errors occurs.		In doctor mode: 1. Press [DISC] button on remote control. To exit, press [ENTER] button on remote control or button on main unit or remote control.

8.1.1. Cassette Mechanism Self-Diagnostic Mode

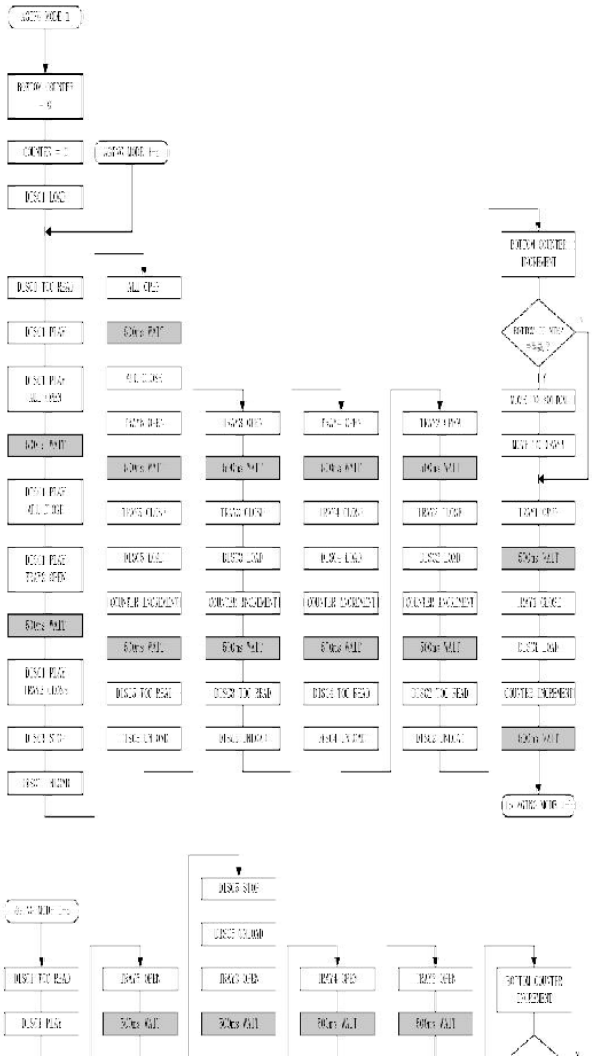
Below is information on the checking of cassette deck mechanism

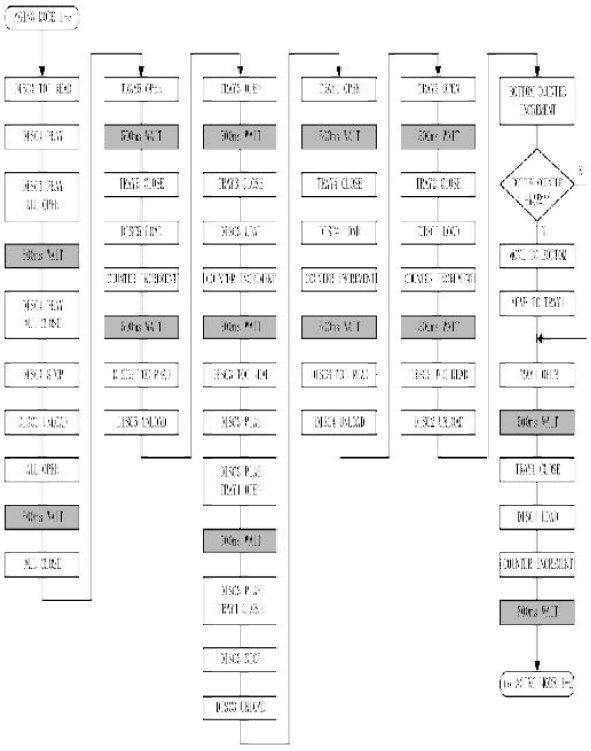
No.	Operation Procedures	Micon operation & processing
1	C-mecha Abnormal Detection shall be executed for DECK 1 only.	Check that all DECK mechanism leaf SW is in OFF state.
2	[∧/FF/►►|] key is pressed, after loading in a NORMAL type cassette with the recording tab on the left side removed.	FF shall be executed for 2 sec, after which STOP. / Check the following. / { F.REC INH SW } is OFF / { R.REC INH SW } is ON / { HALF SW } is ON / Reel pulse toggles between H & L.
3	[|◄◄, REW/∨] key is pressed, after loading a NORMAL, CrO2, METAL type cassette with the recording tab on the right side removed.	REW shall be executed for 2 sec, after which STOP. / Check the following. / { F.REC INH SW } is ON / { R.REC INH SW } is OFF / { HALF SW } is ON / Reel pulse toggles between H & L.
4	[TAPE ►] Key is pressed, after loading in a NORMAL, CrO2, METAL type cassette (cassette for TPS checking purposes and with both recording tabs intact).	TPS operation is executed. Check the following. / { F.REC INH SW } is ON / { R.REC INH SW } is ON / { HALF SW } is ON / TPS signal changes. / After checking TPS, it shall STOP. / If TPS checking is completed at TAPE END, it is considered as TPS abnormal.
5	[REC] key is pressed, after loading in a NORMAL type cassette (with both recording tabs intact)	REC operation shall not be executed. / Check the following. / { F.REC INH SW } is ON / { R.REC INH SW } is ON / { HALF SW } is ON
6	Self-diagnostic mode is stopped by pressing the [■] Key.	LCD shall display the abnormality item code, when the STOP key is pressed, it shall display the abnormality item code in the following sequence. / [T H 0 1] [T H 0 2] [T H 0 3]
7	To clear all the abnormalities in the memory, press the [ ] Key for more than 5 Sec while the self-diagnostic mode is stopped.	At this time, all the abnormalities item in the memory is cleared and is displayed on the LCD.[C L E A R] display for 1 Sec. then,[T] is displayed.
8	To cancel the self-diagnostic mode press the [POWER] Key.	POWER is OFF.At the next POWER ON, normal operation shall be executed.

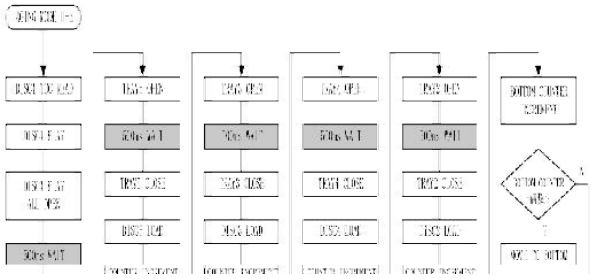
- If RAM check error occurs during microcomputer reset, COLDSTART shall be executed and all the error memory shall be cleared during RAM initialization.

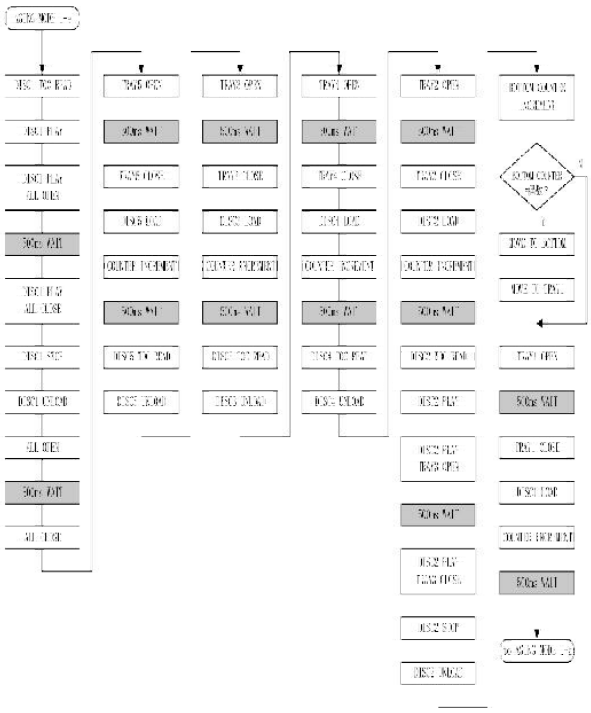
8.1.2. CD changer unit Reliability Test (Ageing Test Mode)

Below is the process flow chart of ageing for the CD changer unit.









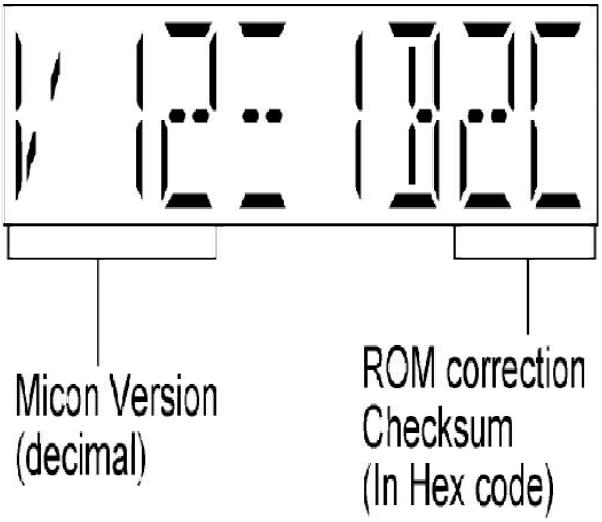
8.1.3. EEPROM Checksum (ROM correction)

Purpose : To check for micro-processor firmware version & EEPROM check (ROM correction).
Below is the procedures for this mode.
Step 1: Enter into Doctor mode (For more information refer to section 8.1 on key operation to enter into this mode).
Step 2: Check for firmware version & EEPROM checksum.

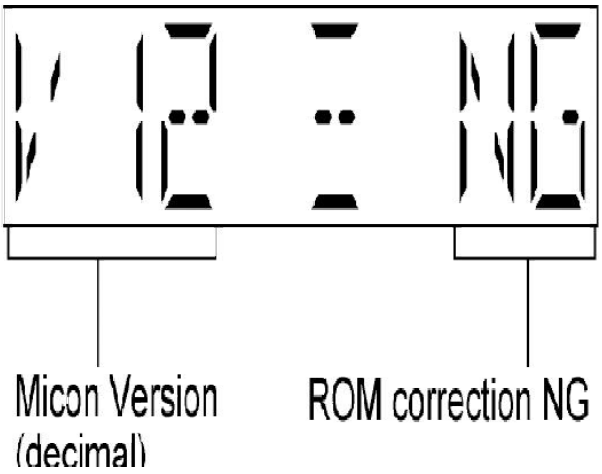
- When entering into DOCTOR MODE the firmware version & checksum of EEPROM (if applicable) will appear on FL display. Below is information on the EEPROM IC (Rom correction) under 3 examples:

1. When EEPROM IC is detected and there is no ROM correction:

2. When EEPROM IC is detected and has ROM correction:



3. When EEPROM IC is detected and has ROM correction but NG:



Note: Micro-processor firmware version refers to version No. (Eg.MS079_12) for micro-processor IC. It is subject to change which would update accordingly.

- Rom correction checksum refers to the hex code that is display upon key buttons pressed if an EEPROM is loaded in the unit. (Main P.C.B)

8.1.4. CD to Tape Recording Inspection

Purpose : To check the recording function from CD to Tape.
Below is the procedures for this mode.
Step 1: Enter into Doctor mode (For more information refer to section 8.1 on key operation to enter into this mode).
Step 2 : Use CDT-018 (Ensure TOC is completed) to CD unit before proceeding.
Step 5 : Press [5] button on remote control. Enter into CD to Tape Test mode. (During this mode, volume is set to [VOLUME 50], Bass & Treble is set to 0dB & H.BASS is switch off).
Note : When in CD to Tape Recording Test mode, the following process is perform :
a) Deck will rewind to start point (point at the start of recording) & Stop. During rewinding of Tape, CD tray (selected) remains open.
b) Recording begins (at constant analogue recording speed) for 3 seconds & Stop. During this time, track 1 is access (-10dB, 400HZ)

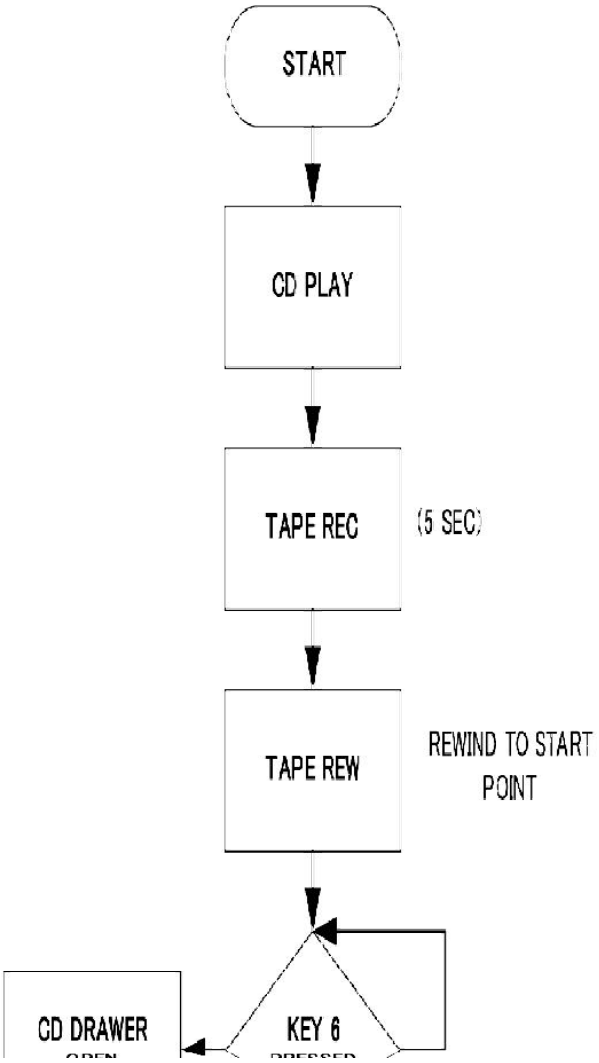
- However, “Error” would be display if there is no tracks to access to, no tape inserted, no test CD inserted or when the tape erasure prevention

tab for FWD side is not suitable for recording.

- When in this mode, if ■, STOP button is pressed the process will stops automatically.

8.1.5. Tape Recording and Playing

Assuming the recording to TAPE has been done in test 3, only playing TAPE is made.
Purpose : To check the Tape function.
Below is the procedures for this mode.
Step 1: Enter into Doctor mode (For more information refer to section 8.1 on key operation to enter into this mode).
Step 2 : Press [6] button on remote control. Enter into Tape recording Test mode. (During this mode, Tape function is set to automatically, volume is set to [VOLUME 50], Bass & Treble is set to 0dB & H.BASS is switch off).
Step 3 : FWD play is made for 3 seconds after setting the above-mentioned, TAPE is stopped 3 seconds later. Tape should open
Note : When in CD to Tape Recording Test mode, the following process is perform :
a) If the erasure prevention tab for FWD side the tape is broken, it is judged as an error and the recording operation does not start.
b) If tape stops by detecting a tape end while recording, it becomes an error.
c) If STOP key is pressed while recording or playing, the operation shall be terminated by stopping TAPE. In this case, the doctor mode is not released.
d) DMT is output with the same timing as usual.


START
CD PLAY
TAPE REC
(5 SEC)
TAPE REW
REWIND TO START POINT
CD DRAWER
KEY 6

8.1.6. TPS Inspection

Purpose : To check the TPS.

Below is the procedures for this mode.

Step 1: Enter into Doctor mode (For more information refer to section 8.1 on key operation to enter into this mode).

Step 2 : Press [⏭/FF/⏭] button on remote control. Enter into TPS Test mode. (During this mode)

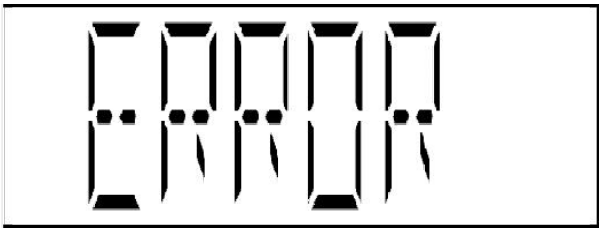
- Software will start checking for existence of cassette in Deck.

- If the Deck does not contain any cassette, it shall end the test and displays the result of the test.

- The test will start by playing the Deck in forward direction for 1 sec and then FF TPS.

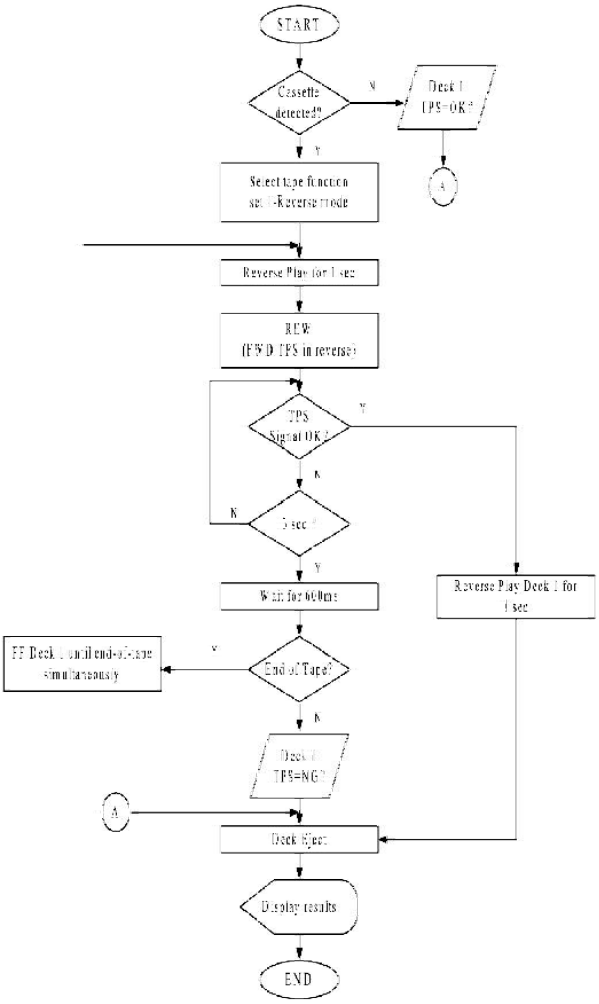
- If TPS signal is OK, the Deck shall be ejected. Below is information on the TPS under 3 examples.

1. If ERROR Flag is set "ERROR" shall be displayed. TPS check result shall not be shown in this case.



2. If Deck TPS check = OK

3. If Deck TPS check = NG



8.1.7. RDS Checking

Purpose : To check the RDS Function.

Below is the procedures for this mode.

Step 1: Enter into Doctor mode (For more information refer to section 8.1 on key operation to enter into this mode).

Step 2 : Press [DISPLAY] button on remote control. Enter into RDS checking. (During this mode)

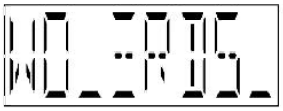
- BASS and TREBLE set to 0dB and preset EQ OFF.

- When [DISPLAY] key is pressed, it will enter the FM band setting.

- The data in test mode 5 shall be memorized.

- For region without RDS is shall be display.

- PS (MODE 1), PTY each shall be displayed for 2 sec each.



PS mode 2 sec

PTY mode 2 sec

STOP key ON

Function shall be set to CD

Doctor mode shall be maintain out will come out of the RDS checking

8.1.8. CR 16 Self Diagnostic

- In order to improve the analysis of faulty condition in CR16 mechanism, CR16 related error codes have been further divided.

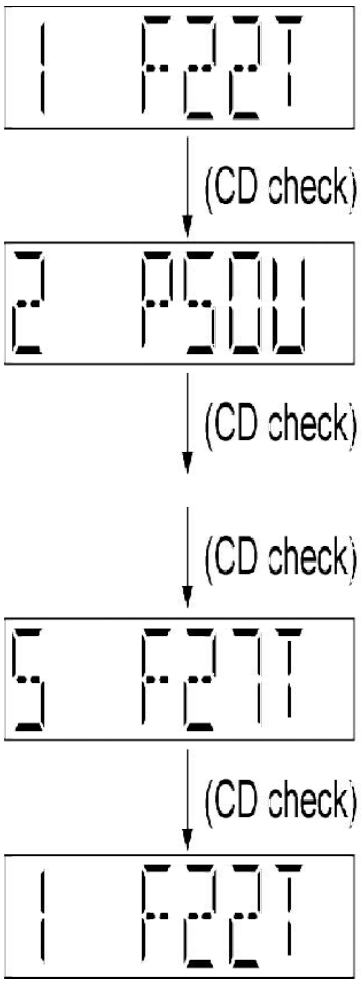
Mode	Present	After modify	Description
Initialize	F17	F17	
		F17P	Play
	F22	F22	
		F22L	Load
		F22T	Trouble
		F22U	Unload
	F27	F27	
		F27T	Trouble
		F27P	Play
	F28	F28	
		F28P	Play
Load/Unload	F28	LOAD	Load
	F29	UNLOAD	Unload
Disc Change	F27	DCHU	Disc change up
		DCHD	Disc change down
Single open / close	F28	NSCL	Normal single close
	F29	NSOP	Normal single open
Single open / close during play	F27	PSOU	Play single open up
		PSOD	Play single open down
		PSCU	Play single close up
		PSCD	Play single close down
	F28	PSCL	Play single close
	F29	PSOP	Play single open
All open / close	H16	H16	

Mode	Present	After modify	Description
	F27	NAOU	Normal all open up
		NAOD	Normal all open down
		NACU	Normal all close up
		NACD	Normal all close down
	F28	NACL	Normal all close
	F29	NAOP	Normal all open
All open / close during play	F27	PAOU	Play all open up
		PAOD	Play all open down
		PACU	Play all close up
		PACD	Play all close down
	F28	PACL	Play all close
	F29	PAOP	Play all open
Lock for shipment	F27	LOCK	Lock
Total	5	37	

- In CR16 Self Diagnostic mode, the errors that occurred in CR16 Mechanism can be recalled and displayed, in the order of the occurrence.
- Only the first 5 errors will be memorized. There after the subsequence error shall be ignored and not memorize.
- The error codes shall be memorized in backup memory. For system with EEPROM as memory backup, memory space in EEPROM is necessary.
- User Operation:

1. To enter CR16 Self Diagnostic mode
   In Self Diagnostic Mode, press [CD CHECK]. System will enter "CR16 Self Diagnostic mode" and shows the content of 1st error code.

2. To display all error code memorized
   In "CR16 Self Diagnostic mode", press [CD CHECK] to display subsequence error code. It shall repeat after reaching error no. 5.



3. To clear the error code memory
   In "CR16 Self Diagnostic mode", long press [CD CHECK] key (2s or more).

4. To exit CR16 Self Diagnostic mode
   Turn off the set.

8.2. Error Code Table

Self-Diagnosis Function provides information on any problems occuring for the units and its respective parts by displaying error codes. Thesed error code such as U, H** and F** are stored in memory and held unless it is cleared.**
The error code is display by enter into self-diagnostic mode.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	MODE SW abnormal			For deck mechanism unit (F deck 1/2). Press [on main unit for next error.
H02	REC INH SW abnormal			For deck mechanism unit (F deck 2). Press [on main unit for next error.
H03	HALF SW abnormal			For deck mechanism unit (F deck 1/2). Press [on main unit for next error.
F01	Reel pulse abnormal			For deck mechanism unit (F deck 1/2). Press [on main unit for next error.
F02	TPS abnormal			For deck mechanism unit (F deck 1/2). Press [on main unit for next error.
F15	CD REST SW Abnormal	CD traverse position intial setting operation failsafe counter (1000 ms) waiting for REST SW toturn on. Error No. shall be clear by force or during cold start.		For CD unit (For Traverse). Press [on main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F26	Communication between CD servo LSI and micro-p abnormal.	CD function DTMS command, after system setting, If SENSE = 'L' cannot be detected. Memory shall contain F26 code. After Power on, CD function shall continue, error display shall be "NO DISC". Error No. shall be clear by force or cold start.		For CD unit (For Traverse). Press [on main unit for next error.
F28	DISC LOAD Abnormal.	While going to play position, if failsafe counter is finished and switch o change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart. Error No. shall be clear by force or cold start.		For CD unit (For Traverse). Press [on main unit for next error.
F29	DISC UNLOAD Abnormal.	While going to play position, if failsafe counter is finished and switch no changeor switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart.Error No. shall be clear by force or coldstart.		For CD unit (For Traverse). Press [on main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F27	SLIDE OPERATION Abnormal.	During vertical operation, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. Next time mechanism operates, it shall do coldstart.Error No. shall be clear by force orcoldstart.		For CD unit (For Traverse). Press [on main unit for next error.
F17	DOWN SW Abnormal.	During vertical operation going to the bottom position, if failsafe timer is finished and switch no change or switch target condition was not achieve, this error shall be memorized. The Next time mechanism operates, it shall do mechanism initialization.Error No. shall be clear by force or coldstart.		For CD unit (For Traverse). Press [on main unit for next error.
F22	LOADING MOTOR/MECHA Abnormal.	During mecha initialization, Loading mode mechanism abnormal, normal operation cannot be achieve.The next time mechanism operates, it shall do mechanism initialization.Error No. shall be clear by fore or coldstart.		For CD unit (For Traverse). Press [on main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
POWER AMP output abnormal		During normal operation, if DCDET becomes "L", normal POWER OFF process shall not be executed, PCONT shall be switched to "L" immediately. "GOODBYE" shall not be display but the error display F61 is displayed instead. 2 seconds after the F61 displayed, ECONO shall be set to "L" and FL display shall be turned off. The error content shall be memorized when the abnormality occurs and can be display in the C-mecha self-diagnostic mode described later.		For Power Supply Related Error Detection. Press [on main unit for next error.

9. Assembling and Disassembling

9.1. Caution

“ATTENTION SERVICER”
Some chassis components may be have sharp edges. Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. / Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

Warning:

This product uses a laser diode. Refer to “Precaution of Laser Diode”.

ACHTUNG:

Die Lasereinheit nicht zerlegen.
Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

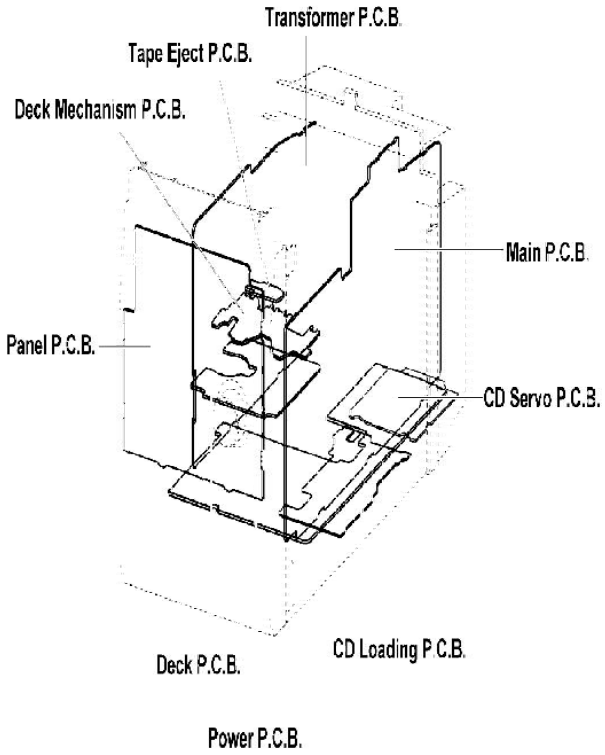
Below is the list of disassembly sections

- **Disassembly of Side Panel L & R**
- **Disassembly of Top Cabinet**
- **Disassembly of Deck P.C.B. and Tape Eject P.C.B.**
- **Disassembly of Front Panel**
- **Disassembly of Panel P.C.B.**
- **Disassembly of Rear Cabinet**
- **Disassembly of Main P.C.B.**
- **Disassembly of Transformer P.C.B.**
- **Disassembly of Tuner Pack**
- **Disassembly of Power P.C.B.**
- **Disassembly of CR16 Mechanism**
- **Replacement of CD Lid**
- **Replacement of Cassette Lid**
- **Replacement of the Power IC and Transistors**

9.2. Disassembly flow chart

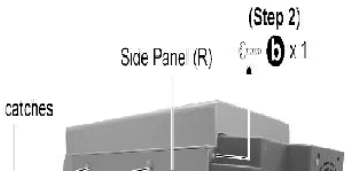
The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.
To assemble the unit, reverse the steps shown in the chart below.

9.3. Main Parts Location Diagram



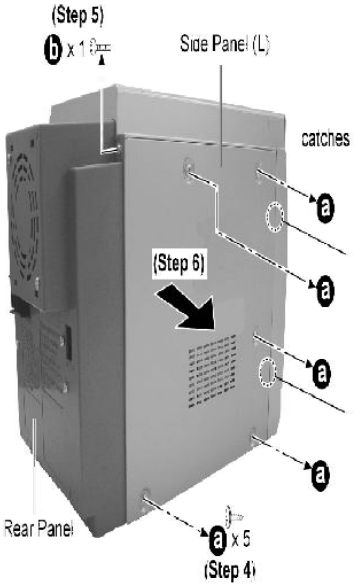
9.4. Disassembly of Side Panel L & R

- Disassembly of Side Panel (R)



Step 1 : Remove 5 screws from the side panel (R).
Step 2 : Remove 1 screw from the corner of the side panel (R).
Step 3 : Remove the side panel as arrow shown (Be careful of the catches).

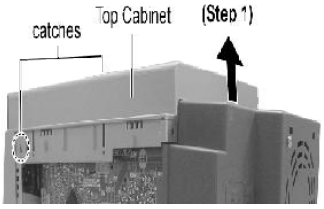
- Disassembly of Side Panel (L)



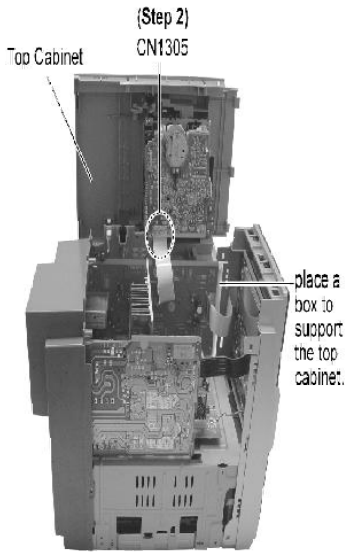
Step 4 : Remove 5 screws from the side panel (L).
Step 5 : Remove 1 screw from the corner of the side panel (L).
Step 6 : Remove the side panel as arrow shown (Be careful of the catches).

9.5. Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 6) of item 9.4.



Step 1 : Lift up the top cabinet as arrow shown (Be careful of the catches).

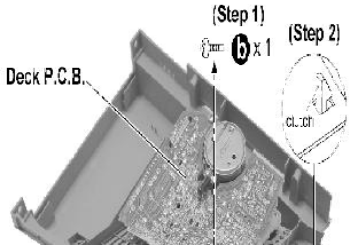


Step 2 : Place the top cabinet as shown and detach the connector CN1305.

9.6. Disassembly of Deck P.C.B. and Tape Eject P.C.B.

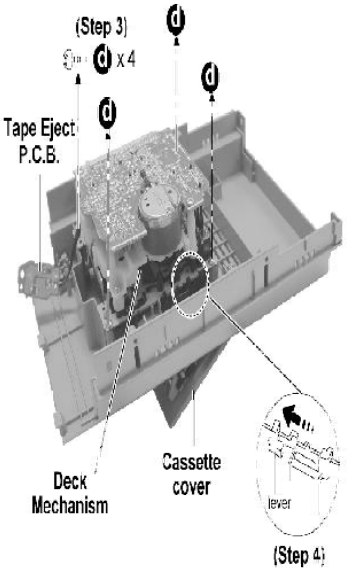
- Follow the (Step 1) - (Step 6) of item 9.4.

- Follow the (Step 1) - (Step 2) of item 9.5.



Step 1 : Remove 1 screw.

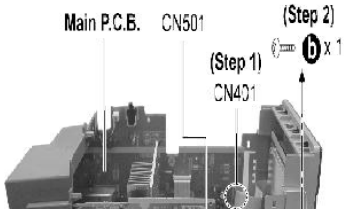
Step 2 : Release the clutch and remove the Tape Eject P.C.B..



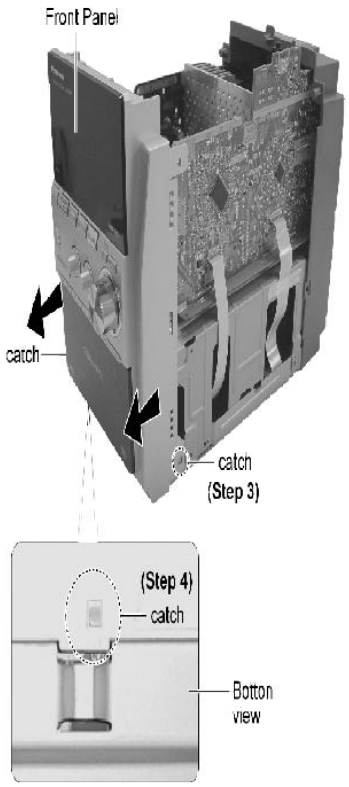
Step 3 : Remove 4 screws.
Step 4 : Push the lever as arrow shown to remove the Deck Mechanism.

9.7. Disassembly of Front Panel

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.



Step 1 : Detach the connector CN401 and CN501.
Step 2 : Remove 1 screw and Chassis ground wire.

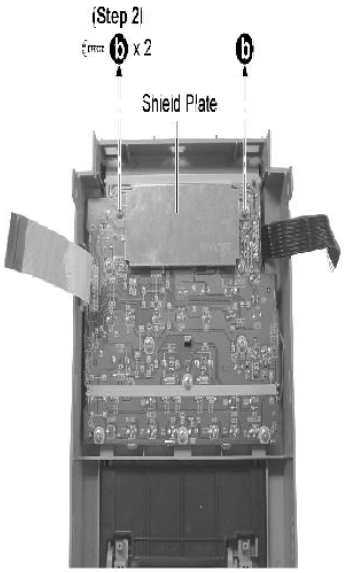


Step 3 : Release 2 catches.
Step 4 : Release the catch at the bottom cabinet and remove the front panel as arrow shown.

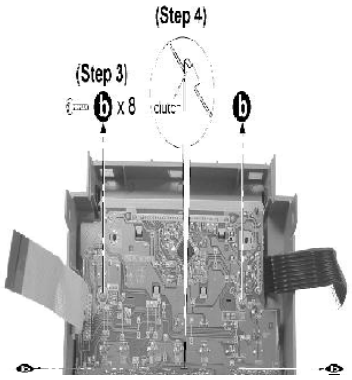
9.8. Disassembly of Panel P.C.B.

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 4) of item 9.7.

Step 1 : Remove the Volume, Treble and Bass knob.



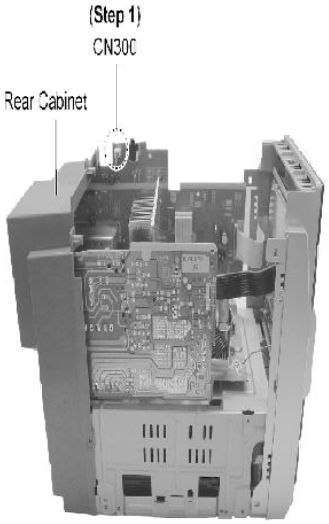
Step 2 : Remove 2 screws and remove the shield plate.



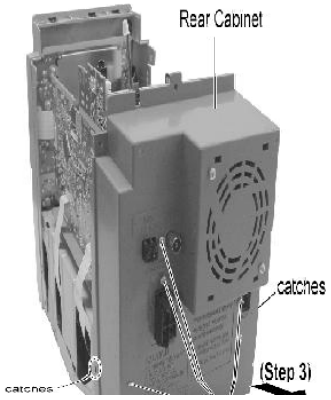
Step 3 : Remove 8 screws .
Step 4 : Release 1 clutch and remove the Panel P.C.B.

9.9. Disassembly of Rear Cabinet

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.



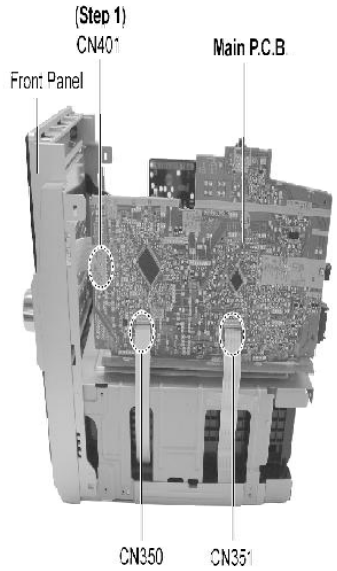
Step 1 : Detach the connector CN300.



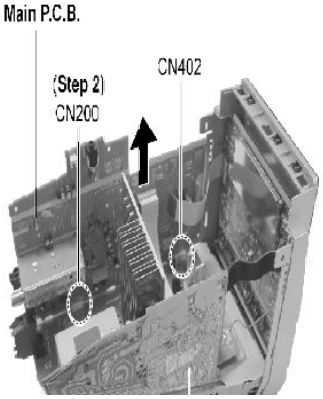
Step 2 : Remove 7 screws altogether.
Step 3 : Remove the rear cabinet as arrows shown (Be careful of the catches).

9.10. Disassembly of Main P.C.B.

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 3) of item 9.9.



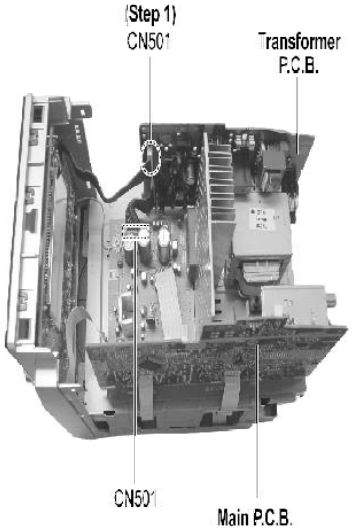
Step 1 : Detach the connector CN401, CN350 and CN351.



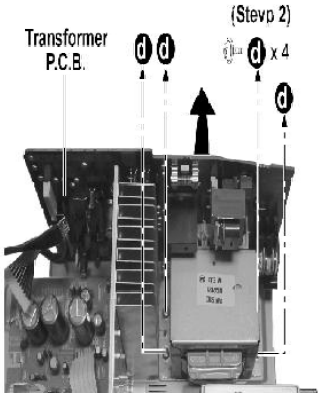
Step 2 : Detach the connectors CN200 and CN402 and pull out the Main P.C.B. as arrow shown.

9.11. Disassembly of Transformer P.C.B.

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 3) of item 9.9.



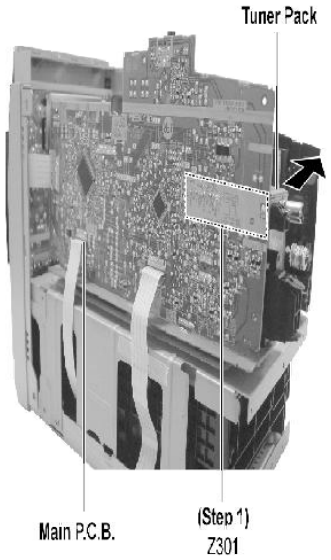
Step 1 : Detach 2 connectors CN501.



Step 2 : Remove 4 screws and pull out the Transformer P.C.B. as arrow shown.

9.12. Disassembly of Tuner Pack

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 3) of item 9.9.



Step 1 : Unsolder Z301 and remove the tuner pack as arrow show.

9.13. Disassembly of Power P.C.B.

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 3) of item 9.9.
- Follow the (Step 1) - (Step 2) of item 9.10.
- Follow the (Step 1) of item 9.11.

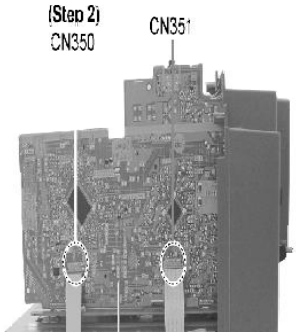
Step 1 : Remove 5 screws.
Step 2 : Remove the Power P.C.B. as arrow shown (Be careful of the catch)

9.14. Disassembly of CR16 Mechanism

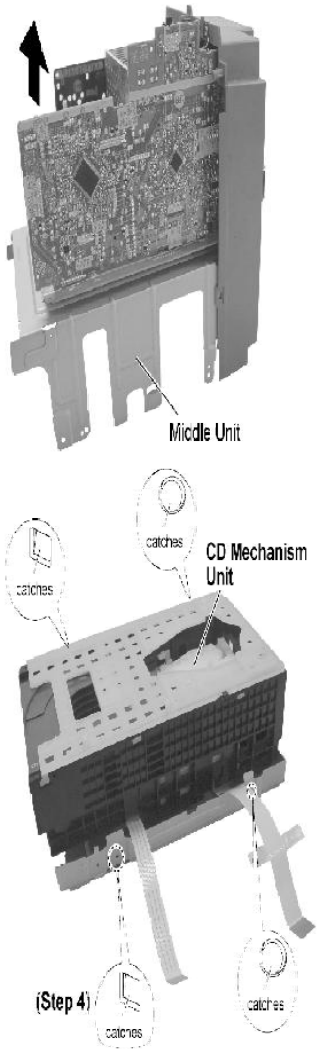
- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.

- Follow the (Step 1) - (Step 4) of item 9.7.

Step 1 : Remove 2 screws.



Step 2 : Detach the connectors CN350 and CN351.
Step 3 : Remove the tape which used to secure the FFC connectors.

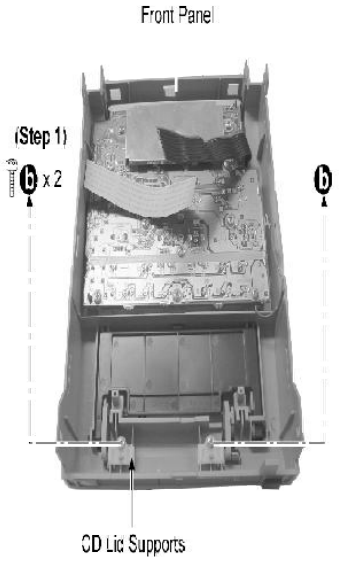


Step 4 : Release the catches and remove the middle block as arrow shown.

Step 5 : Remove 2 screws and remove the CD Mechanism Unit from the bottom chassis as arrow shown.

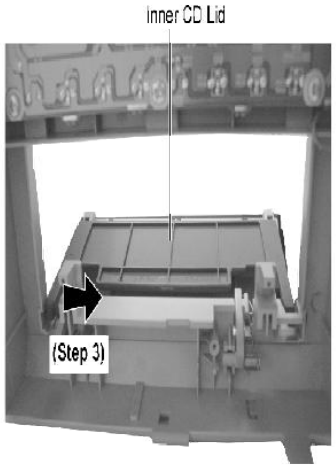
9.15. Replacement of CD Lid

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 4) of item 9.7.

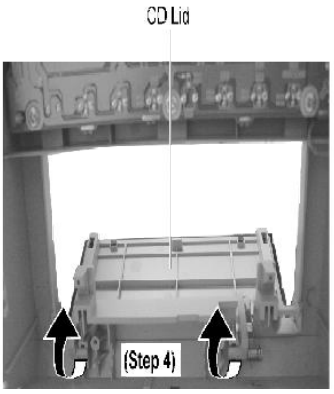


Step 1 : Remove 2 screws and 2 CD Lid supports.

Step 2 :Release the spring hook as arrow shown.



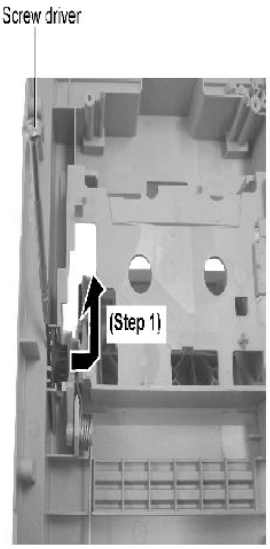
Step 3 : Remove the Inner CD Lid as arrow shown.



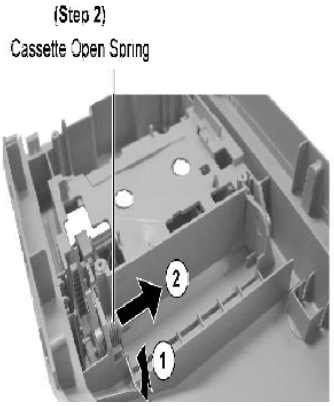
Step 4 : Remove the CD Lid as arrow shown.

9.16. Replacement of Cassette Lid

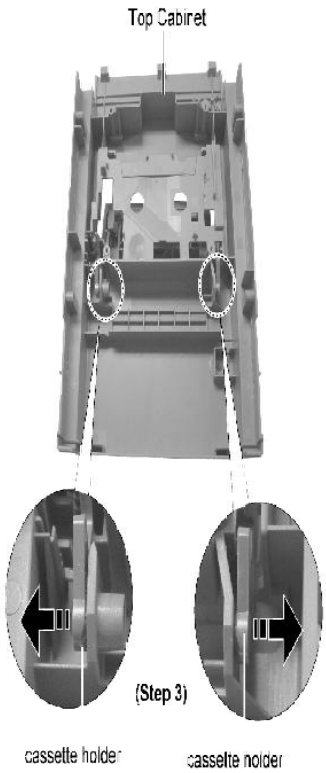
- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 4) of item 9.6.



Step 1 : Using screw driver to remove Damper gear as arrow shown.



Step 2 : Remove the cassette open spring as arrows shown in order.

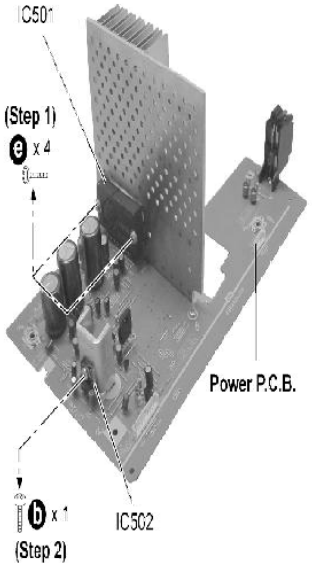


Step 3 : Pull both sides cassette holders to the direction of the arrows shown.

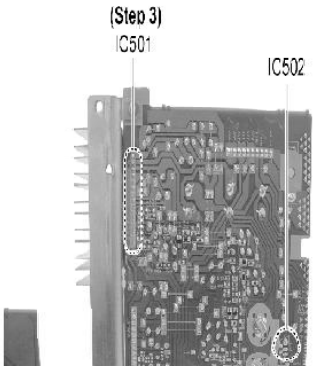
Step 4 : Remove the cassette lid as arrow shown.

9.17. Replacement of the Power IC

- Follow the (Step 1) - (Step 6) of item 9.4.
- Follow the (Step 1) - (Step 2) of item 9.5.
- Follow the (Step 1) - (Step 3) of item 9.9.
- Follow the (Step 1) - (Step 2) of item 9.10.
- Follow the (Step 1) of item 9.11.
- Follow the (Step 1) - (Step 2) of item 9.13.



Step 1 : Remove 4 screws.
Step 2 : Remove 1 screw.

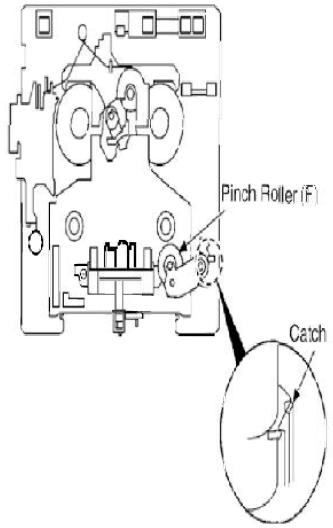


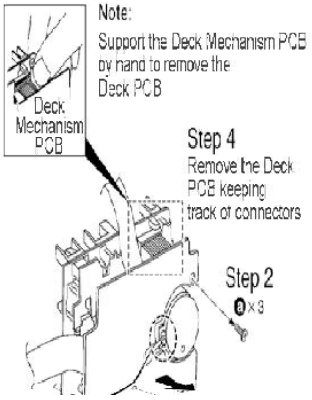
Step 3 : Unsolder the Power IC501 and 502.

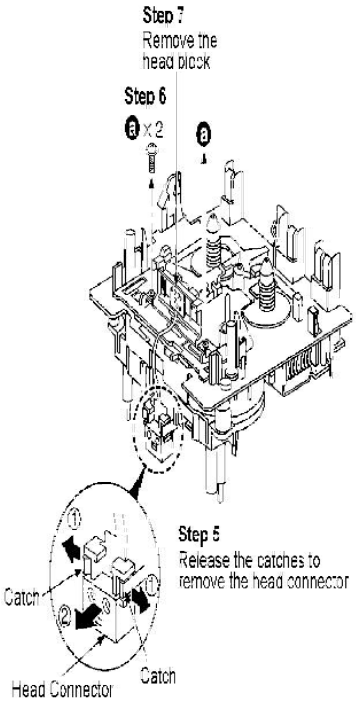
9.18. Procedure for Replacing Pinch Roller and Head Block (Deck Mechanism Unit)

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.6.

Step 1
Release catches to remove the pinch rollers (F).

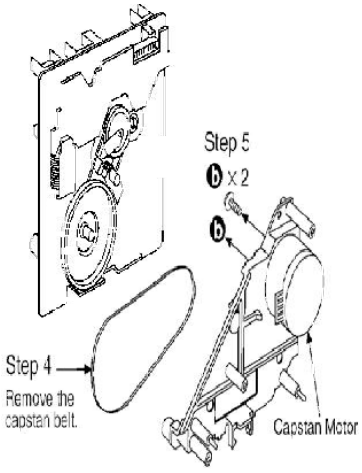


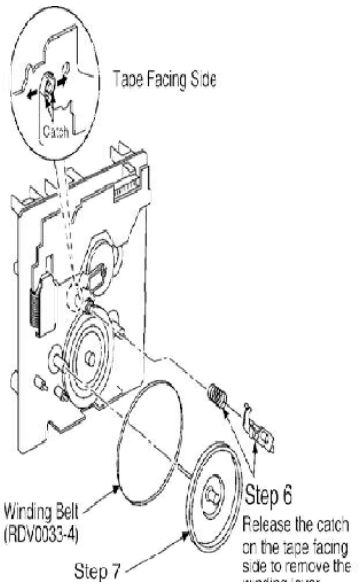

Deck Mechanism PCB
Note:
Support the Deck Mechanism PCB by hand to remove the Deck PCB
Step 4
Remove the Deck PCB keeping track of connectors
Step 2
×3

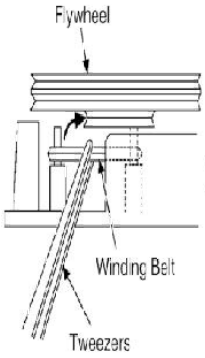


9.19. Procedure for Replacing Motor, Capstan Belt A, Capstan Belt B, and Winding Belt (Deck Mechanism Unit)

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.6.
- Follow the (Step 1) - (Step 4) of Item 9.18.

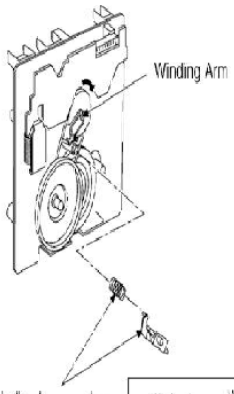

Step 5
ⓑ x 2
ⓑ
Step 4
Remove the
capstan belt.
Capstan Motor


Tape Facing Side
Catch
Winding Belt
(RDV0033-4)
Step 6
Release the catch
on the tape facing
side to remove the
Step 7



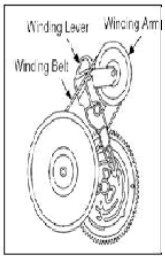
Step 4

Catch the winding belt on the flywheel (F).

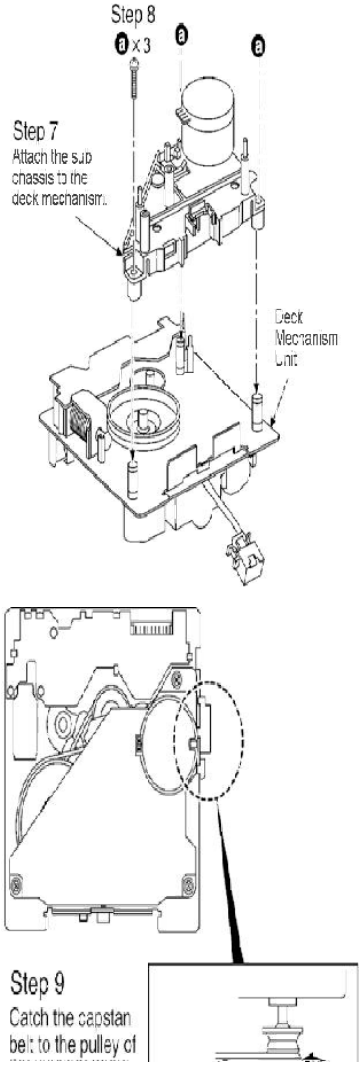


Step 5

Install the winding lever and spring while the winding arm is pressed to the arrow direction. (Be sure that the winding lever is firmly inserted and the catch is hooked.)



Note:
The winding lever should be positioned as shown in the right figure.

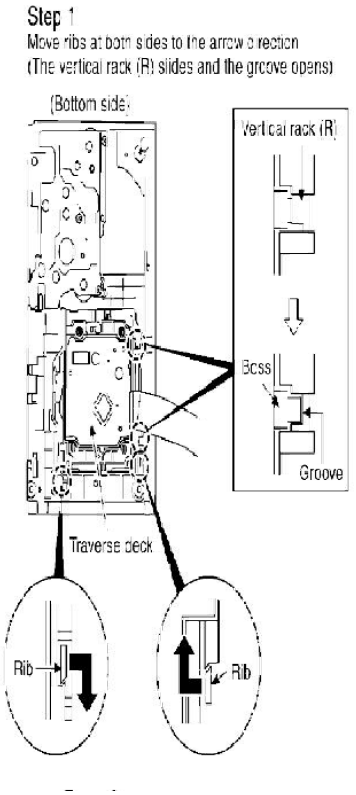


9.20. Procedure for Replacing Parts on Deck Mechanism PCB

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.6.

9.21. Disassembly of CR16 Mechanism

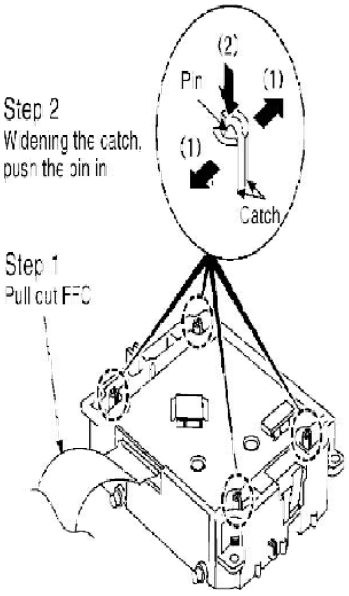
- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.



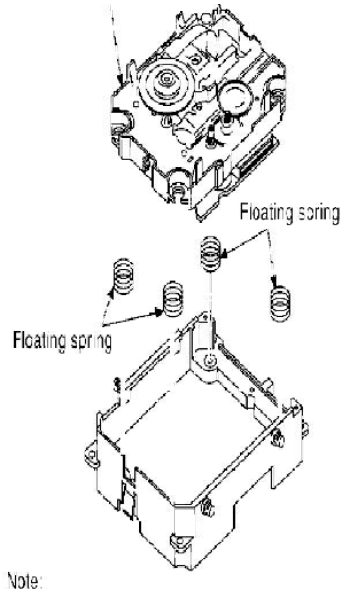
9.22. Replacement of optical pickup unit (CD mechanism)

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.

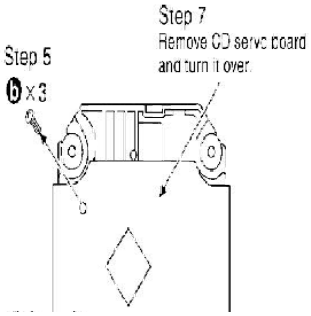
- Follow the (Step 1) - (Step 2) of Item 9.21.



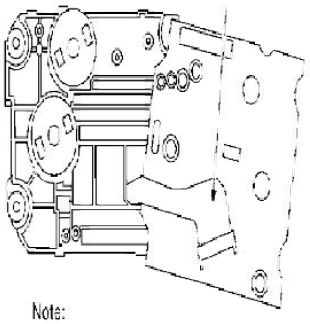
Step 4
Remove the traverse deck



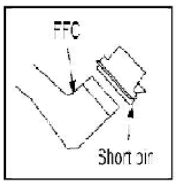
Note:
As floating springs (4 pieces) come off at the same time, be careful not to lose them.



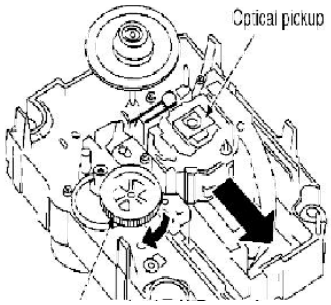
Step 8
Pull FFC out from the connector.

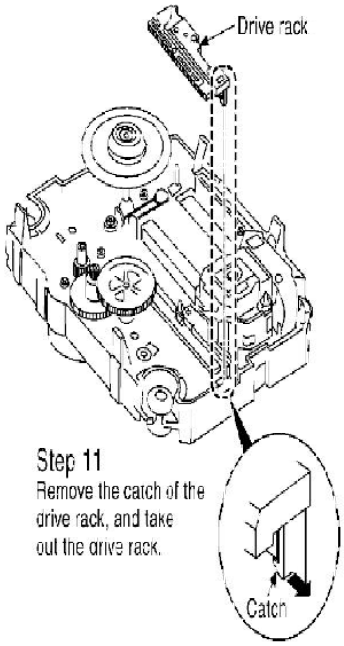


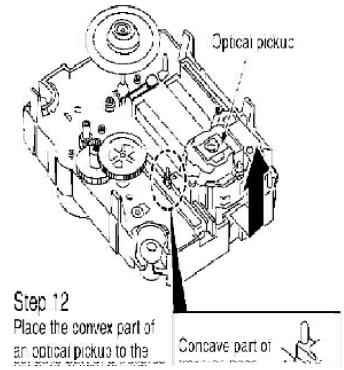
Note:
Insert a short pin into FFC of the optical pickup. [See "Notice on handling of the optical pickup"]



Step9
Rotate the traverse gear (B) to the arrow direction and shift the optical pickup to the furthest backward.

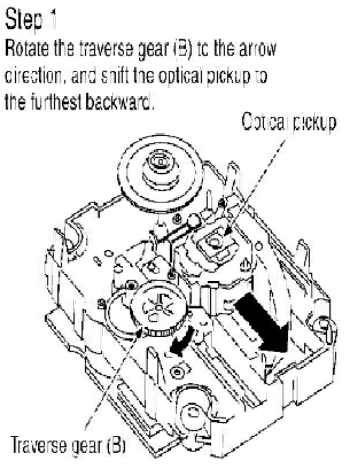


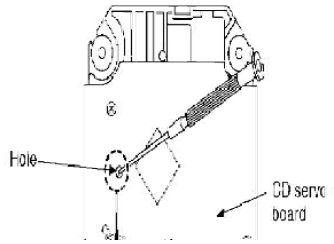


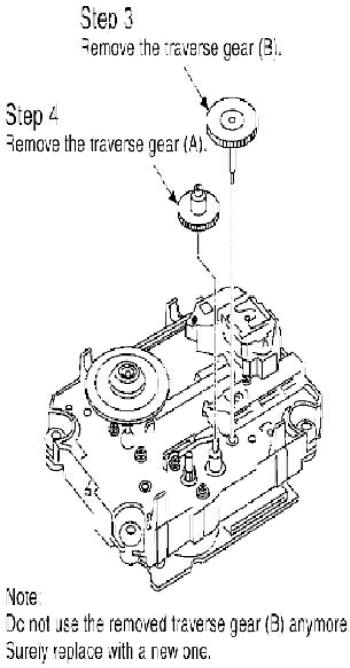


9.23. Replacement of a traverse gear A and a traverse gear B

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.
- Follow the (Step 1) - (Step 2) of Item 9.21.
- Follow the (Step 1) - (Step 4) of Item 9.22.


Step 1
Rotate the traverse gear (B) to the arrow direction, and shift the optical pickup to the furthest backward.
Optical pickup
Traverse gear (B)




Step 3
Remove the traverse gear (B).
Step 4
Remove the traverse gear (A).
Note
Do not use the removed traverse gear (B) anymore.
Surely replace with a new one.

9.24. Procedure for removing CD loading mechanism

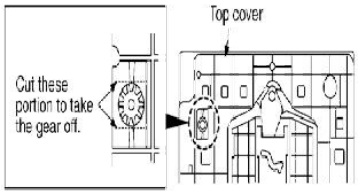
1. Turn off by pressing power SW in the body.
2. Unplug AC power cord after the indication of [GOOD-BYE], then disassemble the body.
3. Disassemble the body, and take out CD loading mechanism.
4. Perform disassembly according to the following procedure for disassembly.

9.25. CR16 mechanism disassembly procedure

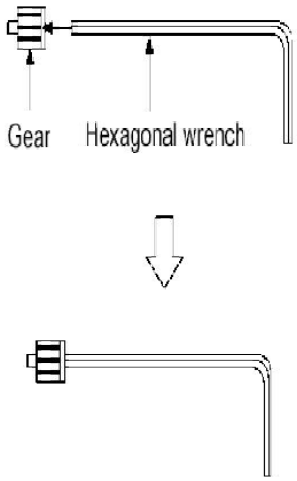
9.25.1. Gear for servicing information

- This unit has a gear which used for checking items (open/close of disc tray, up/down operation of traverse unit by manually) when servicing. (For gear information, that is described on the items for disassembly procedures.)
- For preparation of gear (for servicing), perform the procedures as follows.
- In case of re-servicing the same set, the " gear for servicing" may be took off because it had been used. So, the "gear for servicing" must be stored.

1. Remove the gear attached to top cover of CD loading mechanism.



2. Insert the hexagonal wrench (2.5mm) into the gear.

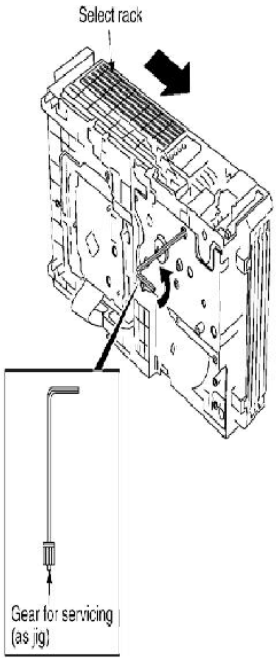


(Preparation of gear as jig is completed)

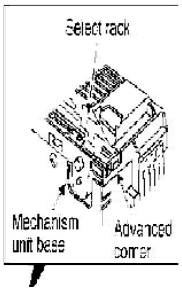
9.25.2. Replacement for the disc tray

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.

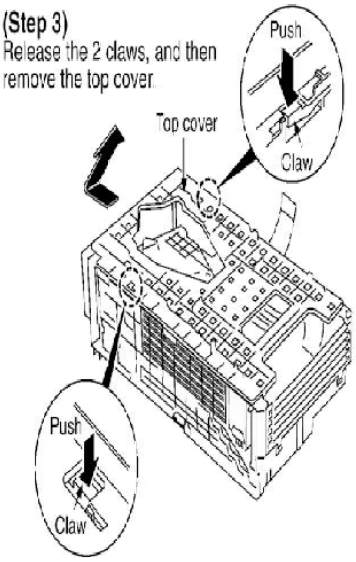
(Step 1)
Rotate the gear for servicing and move the select rack to advanced corner.



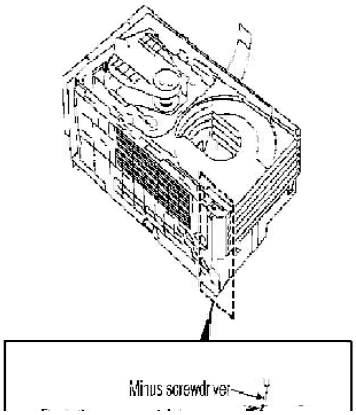
(Step 2)
Fit the mechanism unit base to se ect rack



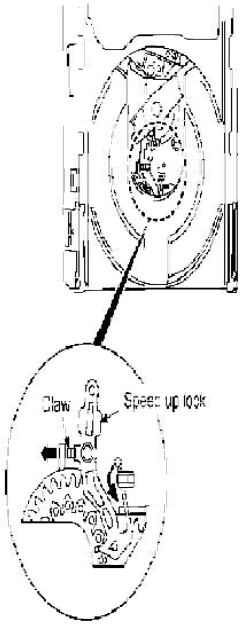
(Step 3)
Release the 2 claws, and then remove the top cover.



(Step 4)
Remove the open switch lever.



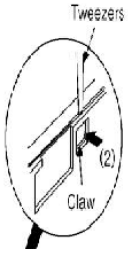
(Step 5)
Release the claw, and then remove the speed up lock.



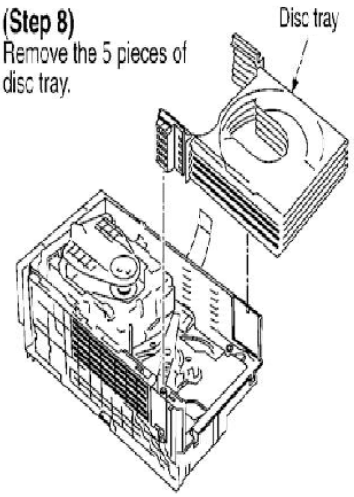
Insert the tweezers between the mechanism base and disc tray, and then lift up the disc tray.

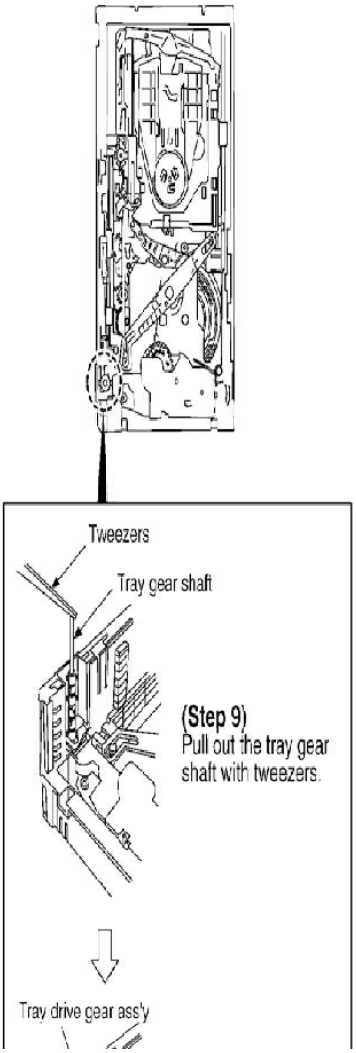
(Step 6)
Draw out all dise tray completely.

(Step 7)
Release the both claws, and then lift up the disc tray.



(Step 8)
Remove the 5 pieces of disc tray.



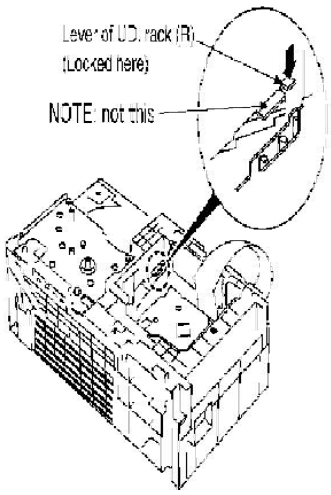


9.25.3. Replacement for the traverse deck

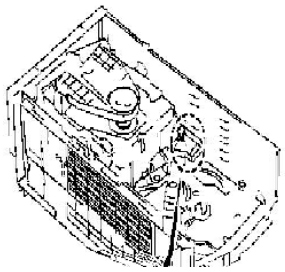
- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.
- Follow the (Step 1) - (Step 10) of Item 9.25.2.

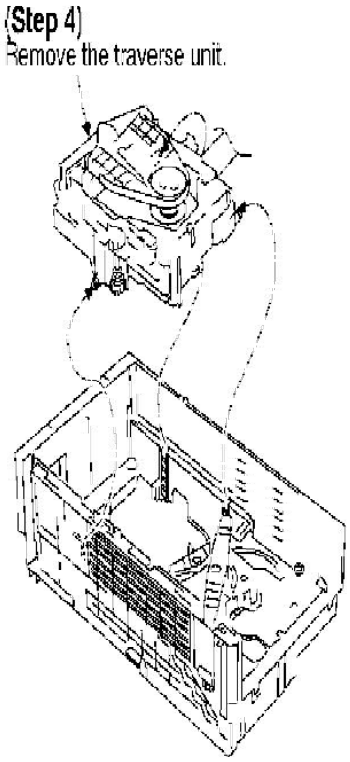
(Step 1)
Confirm the position for lever of UD. rack (R) to remove traverse unit.

(Step 2)
Turn the unit over. (Upside: P.C.B.)



(Step 3)
Turn the unit over again, slice UD. rack (R) while pushing up the lever from the bottom.

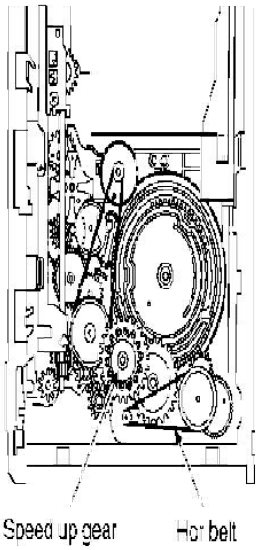




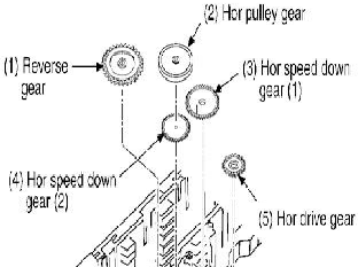
9.25.4. Disassembly for CD loading unit

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.
- Follow the (Step 1) - (Step 10) of Item 9.25.2.
- Follow the (Step 1) - (Step 4) of Item 9.25.3.

(Step 3)
Remove the speed up gear and hor belt.

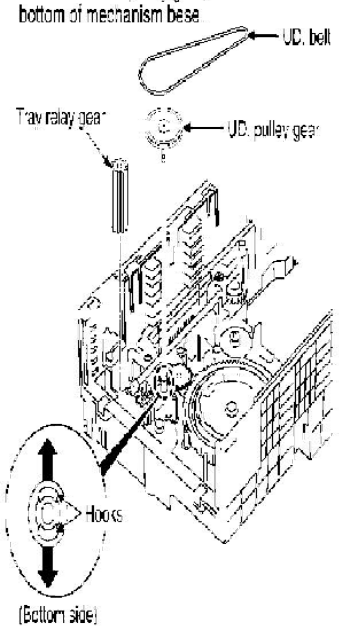


(Step 4)
Remove the reverse gear, hor pulley gear, hor speed down gear (1), hor speed down gear (2) and hor drive gear.

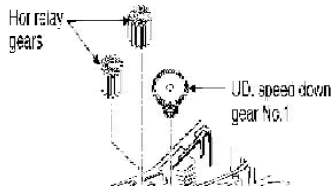


(Step 5)
Remove the UD. belt and tray relay gear.

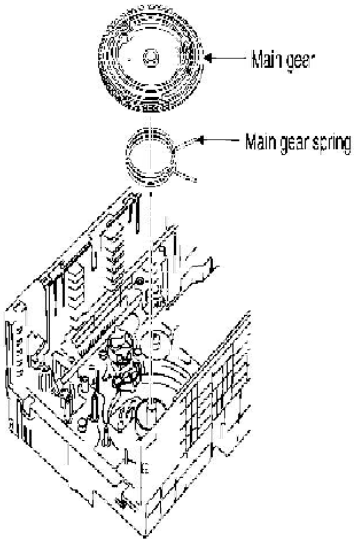
(Step 6)
Pull out the UD. pulley gear. Loosen 2 hooks of the bottom of mechanism base.



(Step 7)
Remove the 2 hor relay gears and UD. speed down gear No.1.

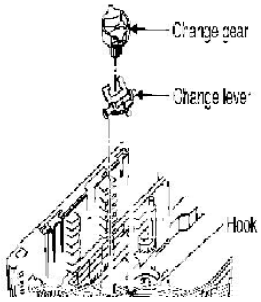


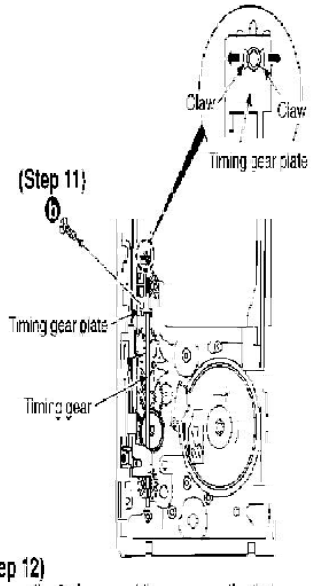
(Step 8)
Remove the main gear and main gear spring.



(Step 9)
Remove the change gear.

(Step 10)
Raise the change lever upright, and pull it out of hook.

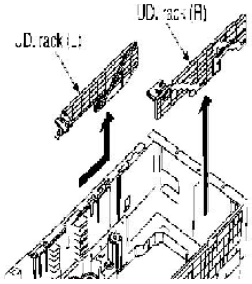




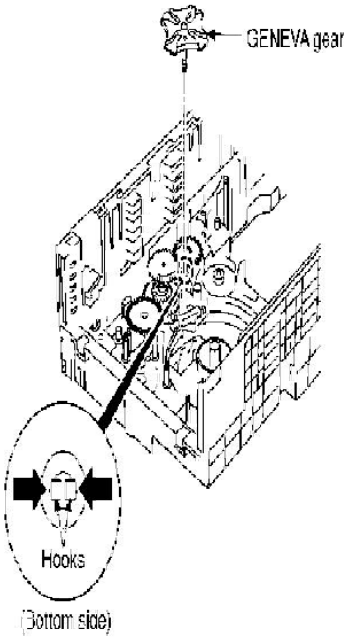
(Step 12)
Release the 2 claws, and then remove the timing gear and timing gear plate.

(Step 13)
Move the U/D. rack (L) to backward, and then remove it.

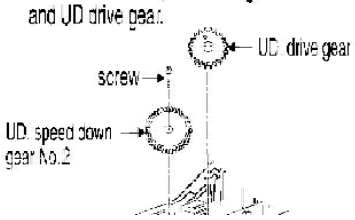
(Step 14)
Remove the U/D. rack (R).

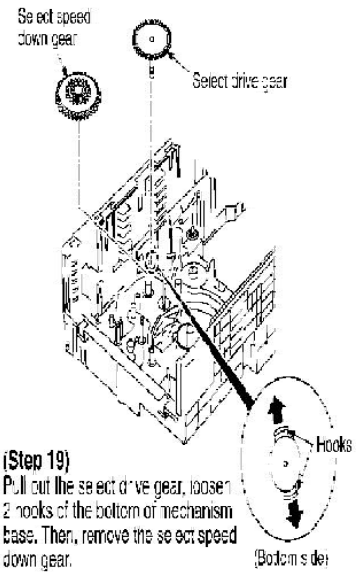


(Step 16)
Pull out the GENEVA gear, loosen 2 hooks of the bottom of mechanism base.



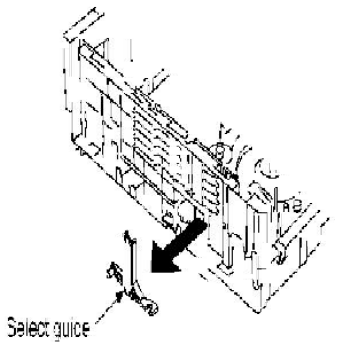
(Step 17)
Remove the UD. speed down gear No.2 and JD drive gear.



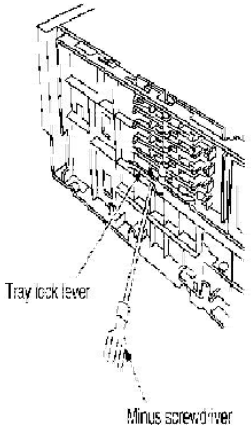


(Step 19)
Pull out the se ect d ve gear, loosen 2 hooks of the bottom of mechanism base. Then, remove the se ect speed down gear.

(Step 20)
Remove the select guide after sliding upside.



(Step 22)
Remove the bottom of the tray lock lever with a minus screwdriver and others.



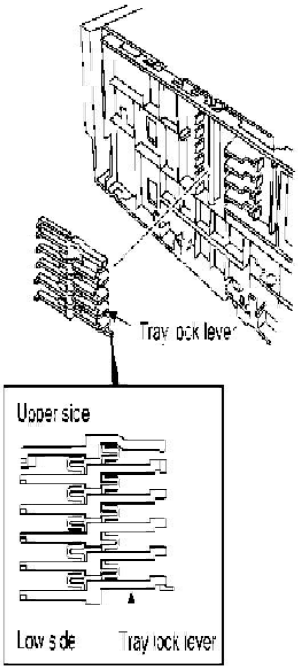
9.26. CR16 MECHANISM ASSEMBLY PROCEDURE

The following specified greases and/or oil must be applied when some specific parts are changed.

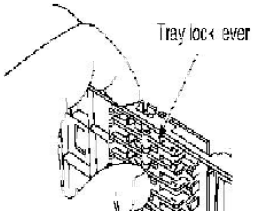
1. **Floil grease (VFK1298) : The floil grease must be applied to tray, tray (L) and tray (R).**
2. **Hanarl oil (VFK1700) : The hanarl oil must be applied to any parts with grease other than the said parts.**

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 2) of Item 9.11.
- Follow the (Step 1) - (Step 5) of Item 9.14.
- Follow the (Step 1) - (Step 10) of Item 9.25.2.
- Follow the (Step 1) - (Step 4) of Item 9.25.3.
- Follow the (Step 1) - (Step 22) of Item 9.25.4.

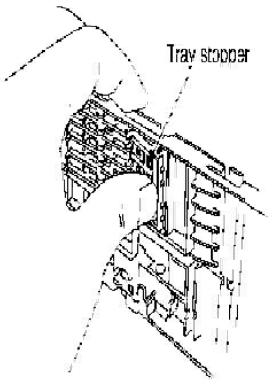
(Step 1)
Install the tray lock lever to mechanism base.



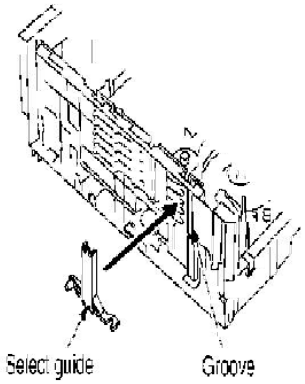
(Step 2)
Push the tray lock lever with a hand and install it.



(Step 4)
Push the tray stopper with a hand and install it.

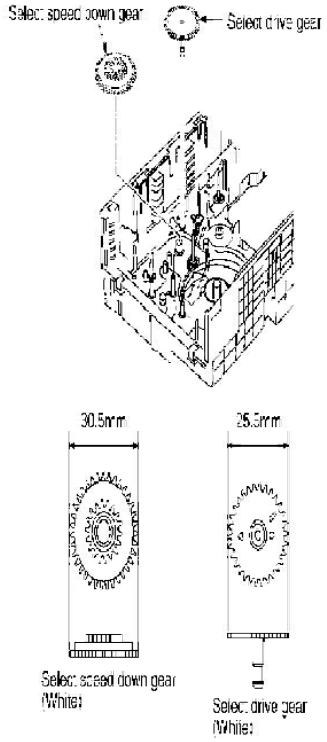


(Step 5)
Insert the select guide with a groove of the mechanism base and move it below.



(Step 6)
Install the select speed down gear to mechanism base.

(Step 7)
Install the select drive gear to mechanism base.



(Step 8)
Fit a mechanism base marking to the rectangular mark of gear so that the triangle mark can indicate the sideward direction.

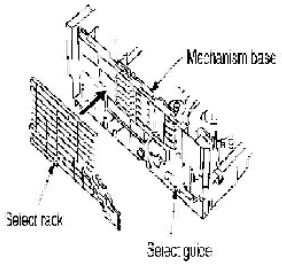
(Step 9)

Install the select rack to mechanism base.

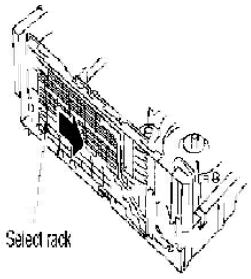
Checking items before the installation.

1. Check select guide is completely in lowest position.
2. Check its phase of select drive gear is correct position.(Rectangle/Triangular mark);Refer to Step 8;

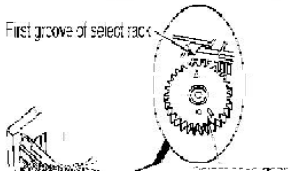
1. Put a select rack down with it fitted to its circumference of mechanism case.



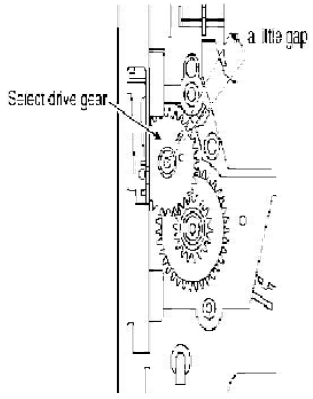
2. Slide the select rack with it's pushing to a little right direction and install it.



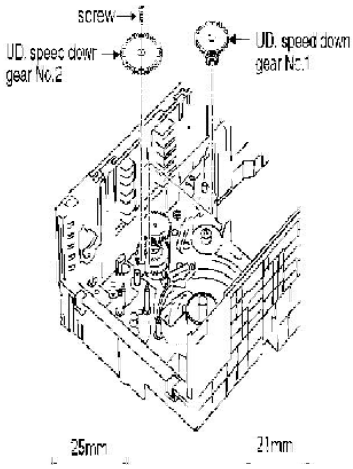
(Figure to see from the inside)



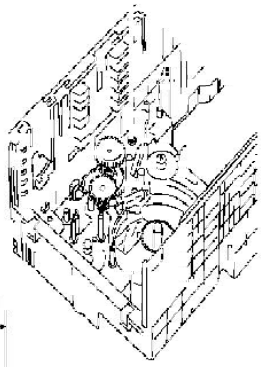
5. After insertion the select rack, the marking of select gear has a little gap when it is in the extreme end.



(Step 10)
Install the UD. speed down gear No.2 and UD. speed down gear No.1.

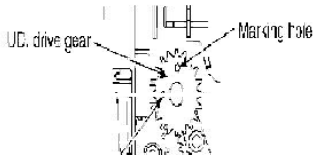


(Step 11)
Install the UD. drive gear to mechanism base.

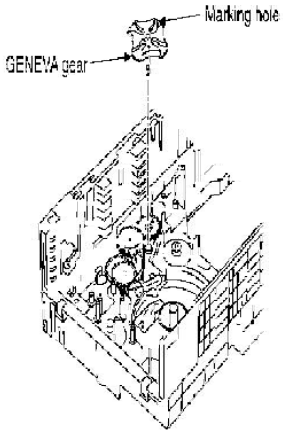


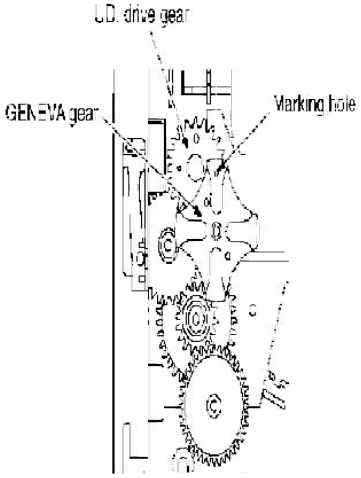
UD drive gear
(White)

(Step 12)
Insert the UD. drive gear with its marking hole upward.
At that time, its triangle mark should be sideways.

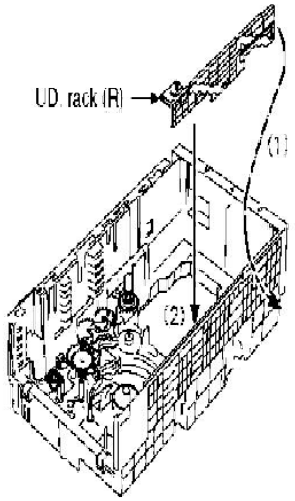


(Step 13)
Insert the GENEVA gear with its marking hole upward, and fix it by 2 hooks on bottom of mechanism base. At that time, U.D. drive gear must be moved

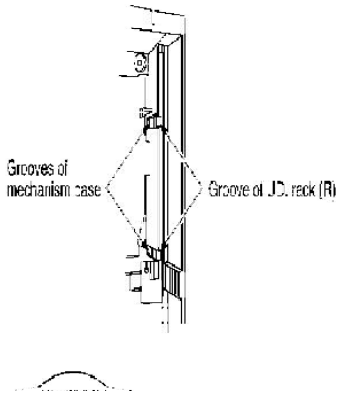


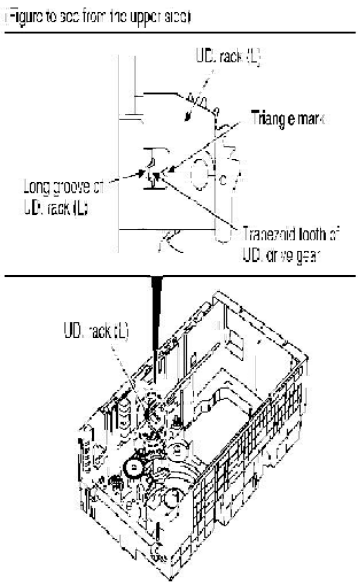


(Step 15)
Insert the UD. rack (R) to (2) from arrow (1).

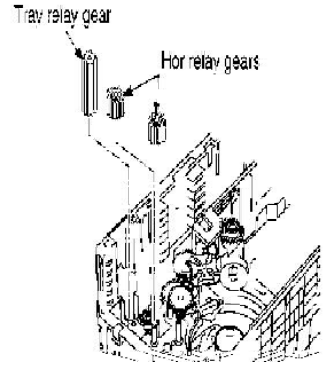


NOTE:
Put a groove of the mechanism base to the UD. rack (R).

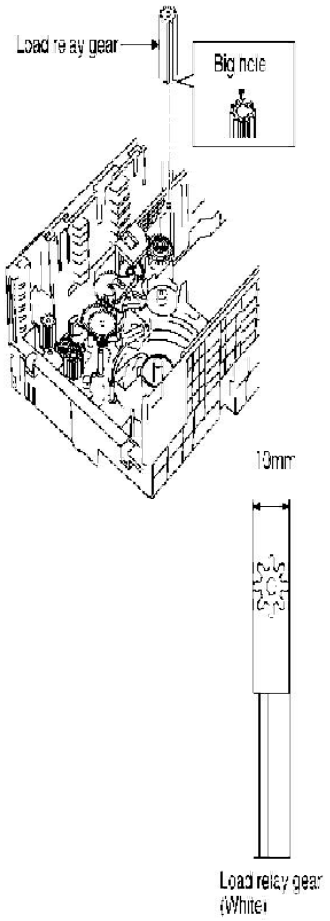




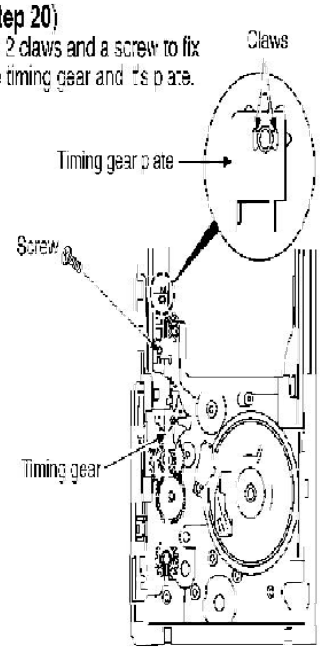
(Step 17)
Install the tray relay gear and 2 hor relay gears.



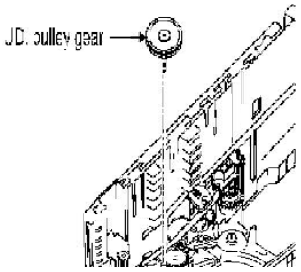
(Step 18)
Install the load relay gear to mechanism base.
(Fit load relay gear with its big hole downward.)



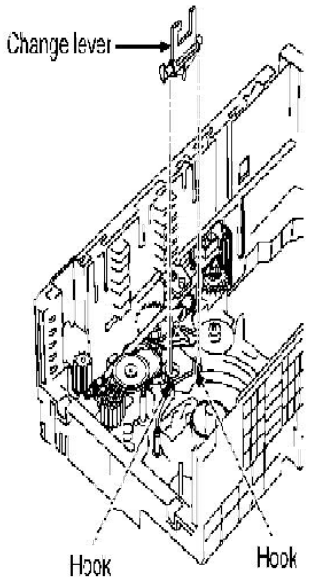
(Step 20)
Fix 2 claws and a screw to fix the timing gear and its plate.



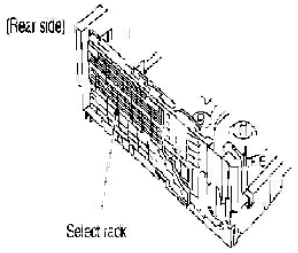
(Step 21)
Install the UD. pulley gear to mechanism base.



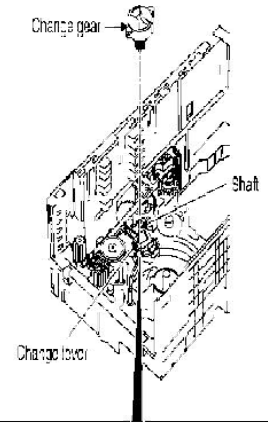
(Step 22)
Insert the change lever with it upright.



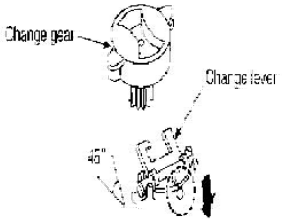
(Step 23)
Be sure the notice of below before fixing the change gear.
1. Select rack should be in the rear of mechanism base.
2. Its hole of GENEVA gear should turn up.



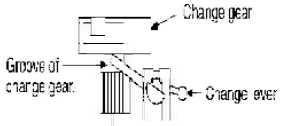
(Step 24)
Install the change gear as insert the change lever into the groove of change gear.



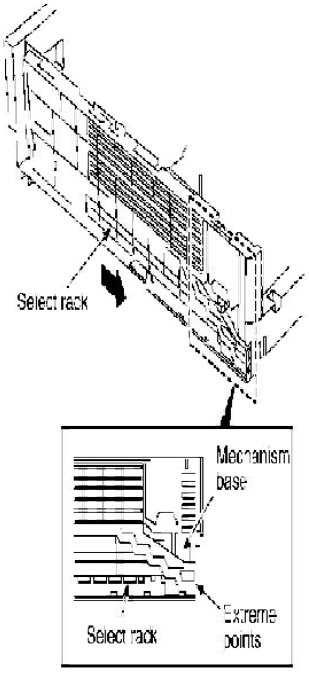
1. Pushing the shaft and pull up the change lever 45°.



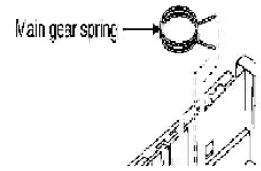
2. Insert the change lever into the groove of change gear.



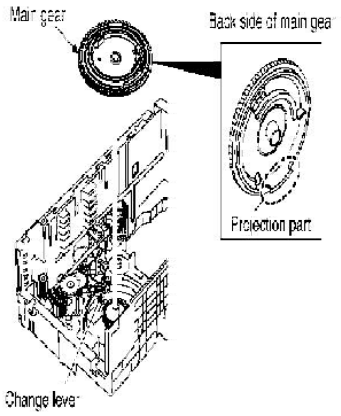
(Step 27)
Move the select rack smoothly forward manually until 2 extreme points of both select track and mechanism base.



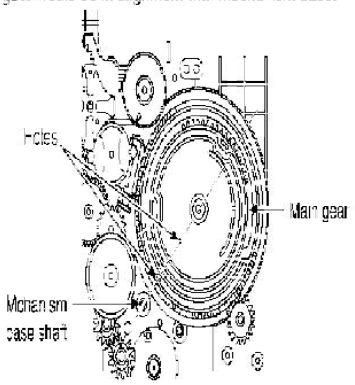
(Step 28)
Install the main gear spring and motor drive gear.



(Step 29)
Don't bring change lever into touch to projection part of main gear when fixing main gear in mechanism case.

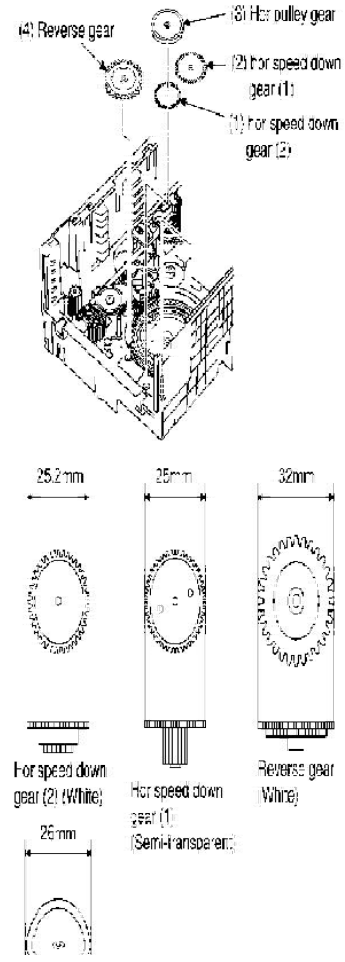


(Step 30)
After that, turn main gear so that 2 holes inside main gear would be in alignment with mechanism case.



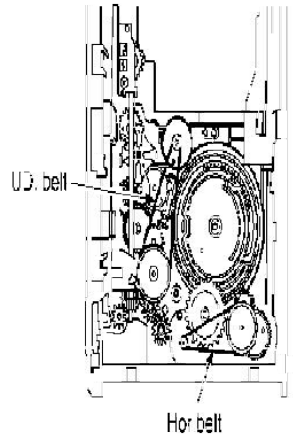
(Step 31)

Install the hor speed down gear (2), hor speed down gear (1), hor pulley gear and reverse gear.

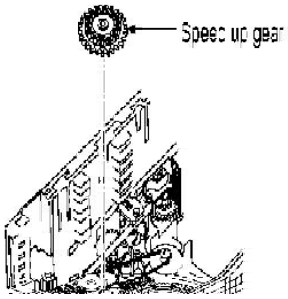


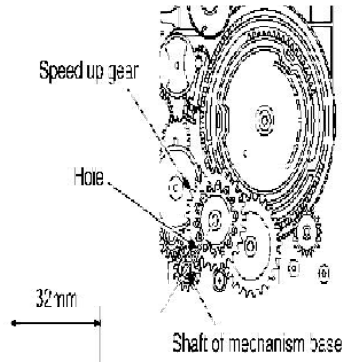
(Step 32)
Install the U.D. belt and hor belt.

NOTE:
1. Take care not apply the grease to the belt.
2. Insta l the belt without twist.



(Step 33)
Install speed up gear to its shaft of mechanism base with 2 fitting.

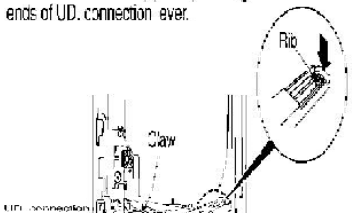




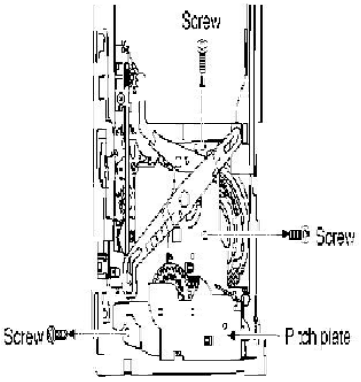
Speed up gear
(White)

(Step 34)
Install the pitch plate. (The 4 claws should be latched.)

(Step 35)
Fix 2 pins of UD. rack (L) and (R) into groove of both ends of UD. connection lever.

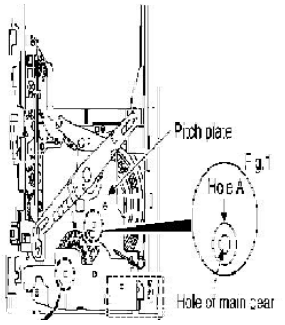


(Step 36)
Fixed it by three screws further.

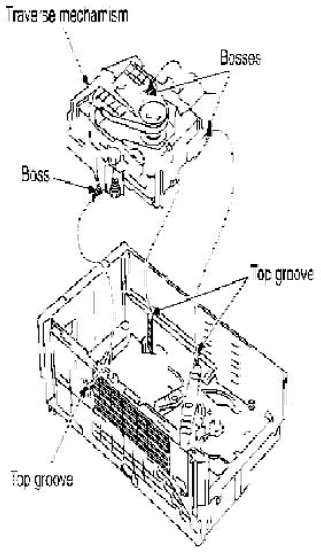


(Step 37)
Be sure the notice of below before fixing the traverse mechanism.

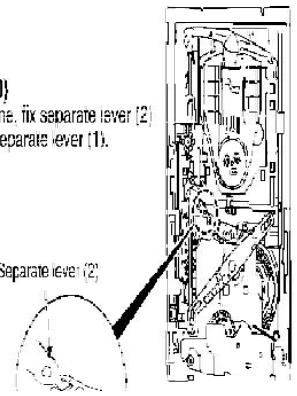
1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holed of both pitch plate and speed up gear is fitted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.



(Step 39)
Fix the left boss into the top groove of the UD rack (L) and fix 2 bosses into the groove of the UD rack (R).



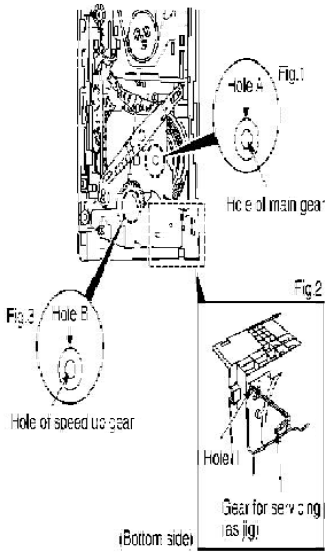
(Step 40)
At that time, fix separate lever (2) into the separate lever (1).



(Step 41)

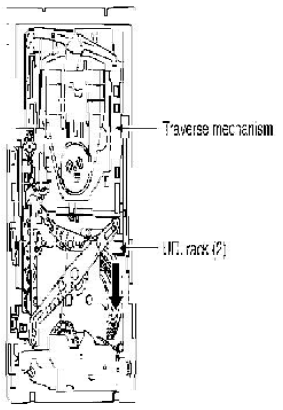
After the traverse mechanism fixed,
confirm the phase in order below.

1. Check that 2 holes of both pitch plate and main gear is fitted. (Refer to Fig.1)
   If it's not fitted, put the gear for servicing in the hole of the bottom side and adjust it. (Refer to Fig.2)
2. Check that 2 holes of both pitch plate and speed up gear is fitted. (Refer Fig.3)
   If it's not fitted turn the speed up gear to adjust it.



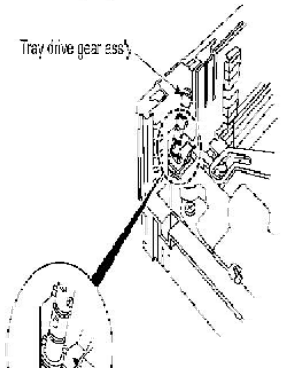
3. In the cog of road gear, the groove with it's cutting halfway set side ward. (Refer to Fig.4)
   Remove the traverse mechanism again when it is not set side ward and install it after adjustment of inserting position.
   NOTE: By this time, do not adjust to rotate the road gear.

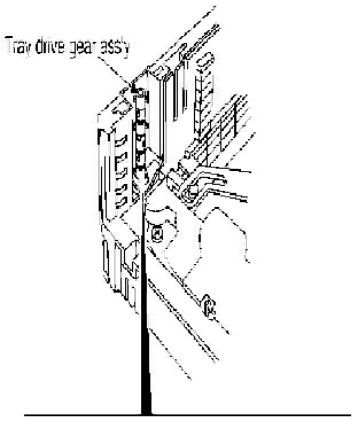
(Step 42)
After insertion of traverse mechanism, pull the UD. rack (R) on this side that each phase is "OK" and then lock the traverse mechanism.

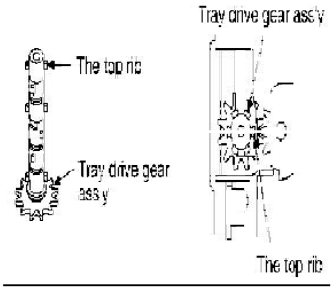


(Step 43)
Install the tray drive gear to select guide.
(Install the top rib of the tray drive gear with side ward.)

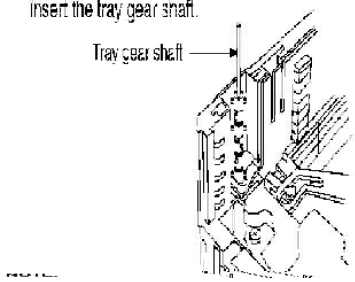
NOTE:
Confirm the each phase surely before install the tray drive gear. (Refer to Step 41).



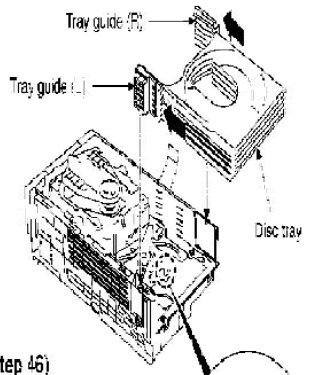




(Step 44)
Insert the tray gear shaft.



(Step 45)
Move the tray guide (R) and (L) to direction of arrow that fixed (stopped) it and install 5 pieces of disc tray.

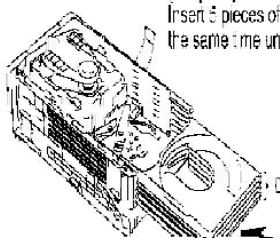


(Step 46)
Confirm that when the disc tray insert the upper side, the speed up gear is rotate clockwise a little.

- When the rotation of speed up gear is not clockwise or rotate, repeat from Step 45.
- Until the speed up gear rorate, repeat from Step 45 and 46.

NOTE:
While keeping all position, install 5 pieces of disc tray.

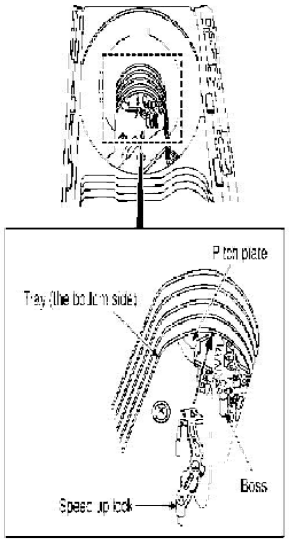
(Step 47)
Insert 5 pieces of disc tray at the same time until it's stop.



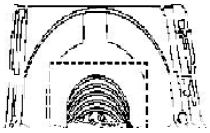
(Step 48)
Turn the traverse slce 180°.

(Step 49)
While instal the tip of speed up lock seween tray (No.1) of the most lower side and pitch plate for the time being.
(Do not to insert the cog of speed up gear), insert it to boss.

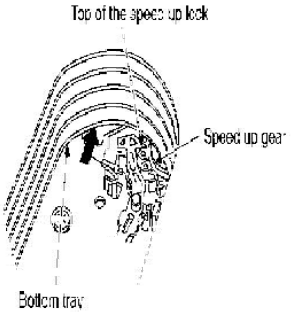
NOTE:
At that time, do not move the tray.
(See the tray the most front side)



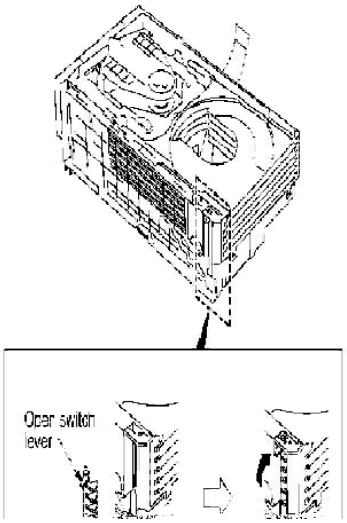
(Step 50)
Insert the rib of speed up lock into a groove of main gear, and lock it with 2 claws.



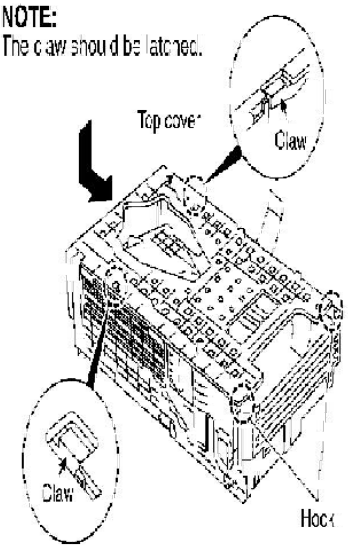
(Step 51)
Move the bottom tray to the arrow while pushing the top of the speed up gear. And insert it to a cog of the speed up gear.



(Step 52)
Install the open switch lever
(Put the boss into the hole of the mechanism base.)



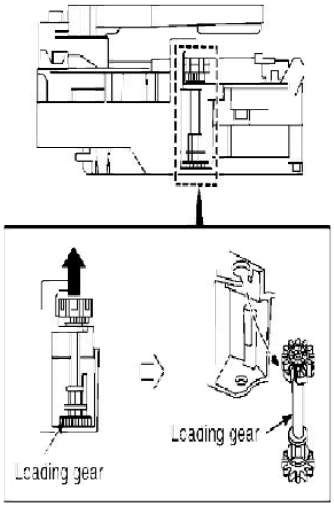
(Step 53)
Install the top cover.
Fix it into hooks and slide direction to the arrow.
NOTE:
The claw should be latched.



9.27. Disassembly of traverse mechanism

- Follow the (Step 1) - (Step 6) of Item 9.4.
- Follow the (Step 1) - (Step 2) of Item 9.5.
- Follow the (Step 1) - (Step 4) of Item 9.7.
- Follow the (Step 1) - (Step 5) of Item 9.14.
- Follow the (Step 1) - (Step 2) of Item 9.21.

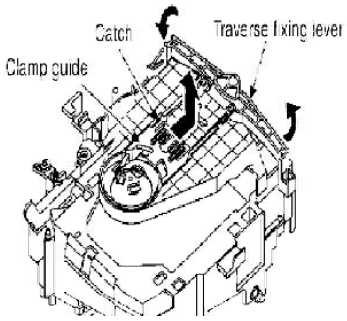
Step 1
Shift tips of both side to the arrow direction.
(A vertical rack (R) slides and groove opens)



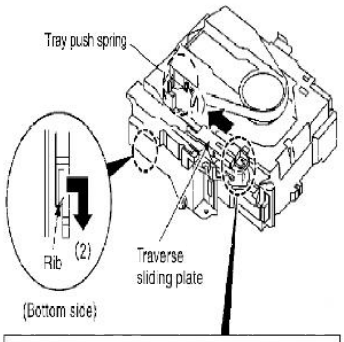
Step 3
Lift a loading gear slightly and pull out.

Step 4
Fixing lever to the arrow direction, rotate a traverse.

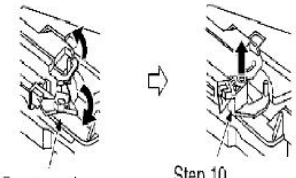
Step 5
Remove catch and take out a clamp guide.



Step 8
Slide a traverse sliding plate to the arrow direction (1), and shift a rib to the arrow direction (2).

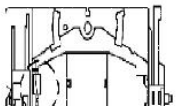


Step 9
Shifting a traverse sliding plate slightly and rotate a tray change lever.



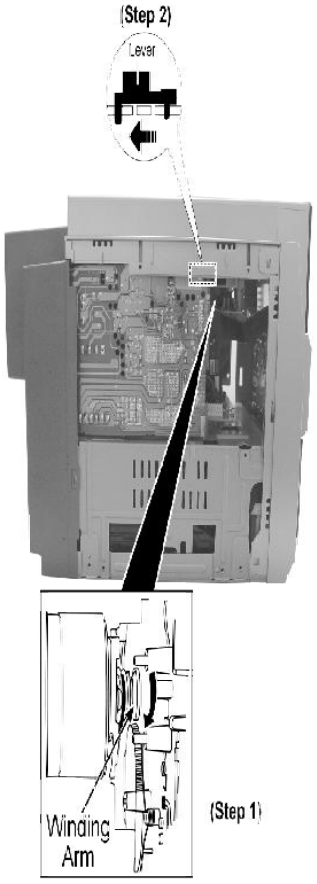
Step 10
Remove a tray change lever.

Step 11
Holding the catch down, slide a traverse sliding plate to the arrow direction and remove it.



9.28. Handling of cassette tape jam

- Follow the (Step 1) - (Step 6) of Item 9.4.

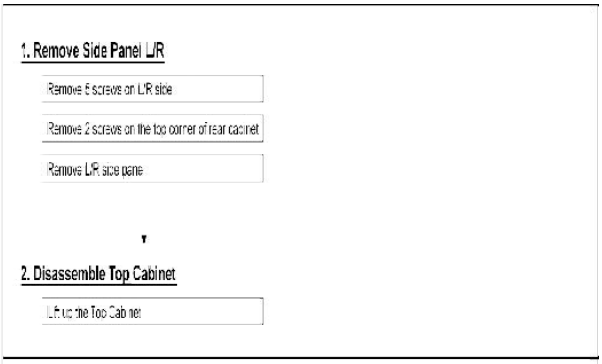


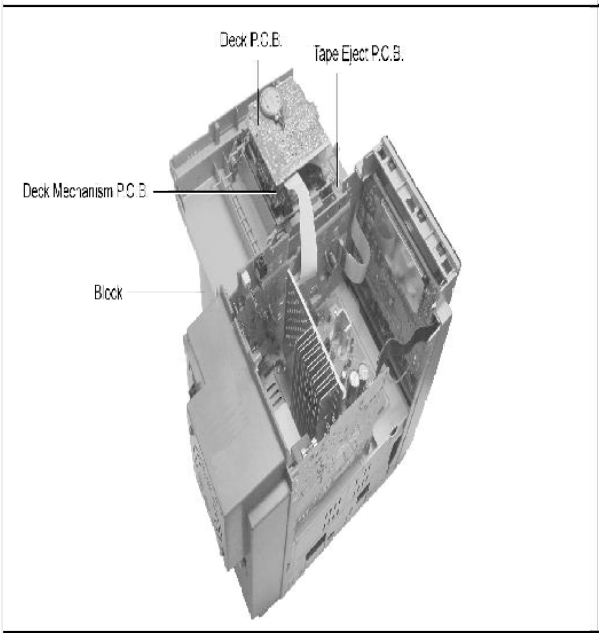
Step 1 : If the cassette tape cannot eject due to twinning around capstan or pinch roller during play or record, rotate the Winding Arm as arrow shown to remove twined tape.
Step 2 : Push the lever as arrow shown to open the cassette lid and remove the cassette tape.

10. Service Positions

Note: For description of the disassembly procedures, see the Section 9.

10.1. Checking and Repairing of Deck, Deck Mechanism and Tape Eject P.C.B.


1. Remove Side Panel L/R
Remove 6 screws on L/R side
Remove 2 screws on the top corner of rear cabinet
Remove L/R side pane
2. Disassemble Top Cabinet



10.2. Checking and Repairing of Transformer P.C.B.

1. Remove Side Panel L/R

Remove 5 screws on L/R side

Remove 2 screws on the top corner of rear cabinet

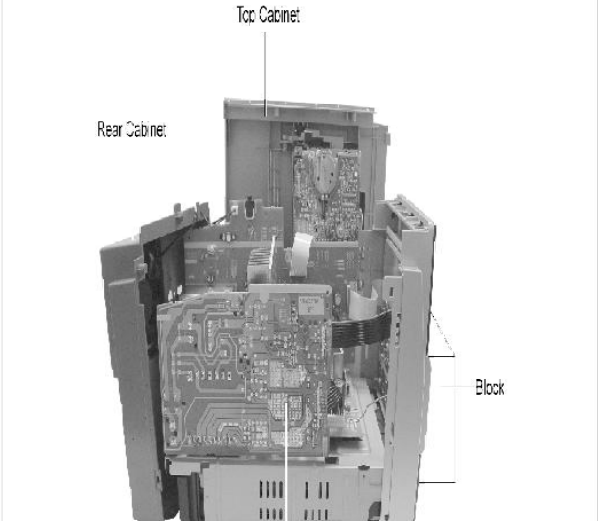
Remove L/R side pane

2. Disassemble Top Cabinet

Lift up the Top Cabinet

3. Disassemble Rear Cabinet

Remove 8 screws



10.3. Checking and Repairing of Main P.C.B.

1. Remove Side Panel L/R

Remove 5 screws on L/R side

Remove 2 screws on the top corner of rear cabinet

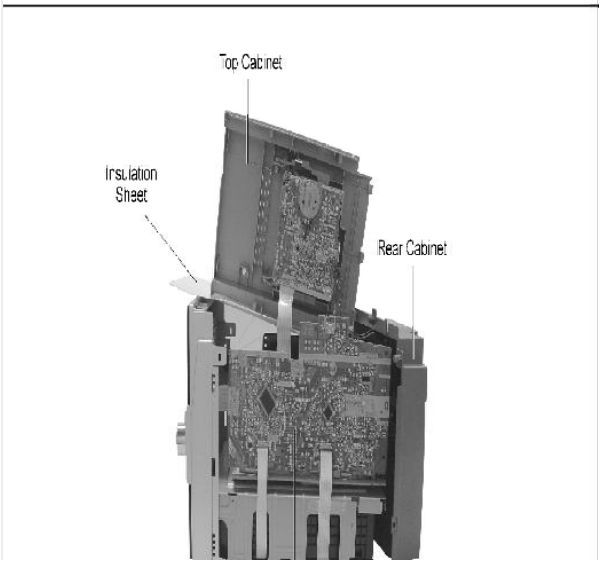
Remove L/R side pane

2. Disassemble Top Cabinet

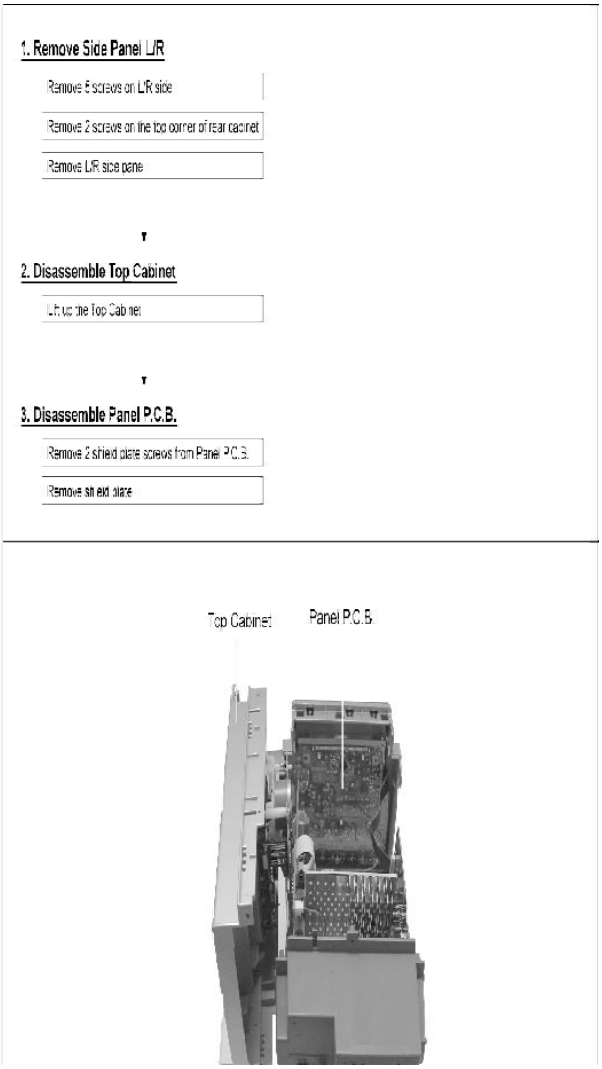
Lift up the Top Cabinet

3. Disassemble Rear Cabinet

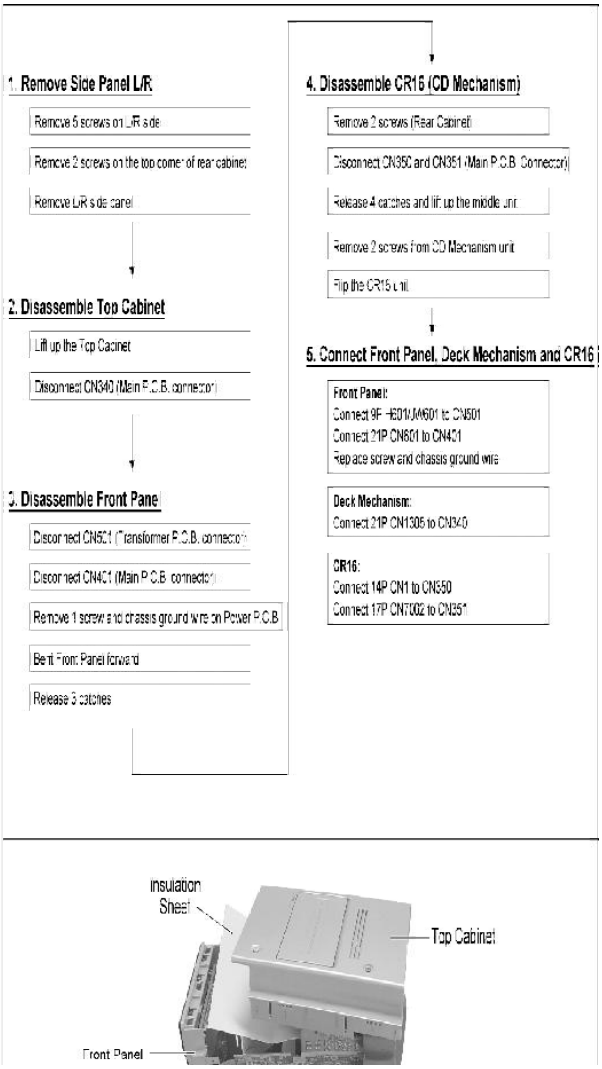
Remove 6 screws



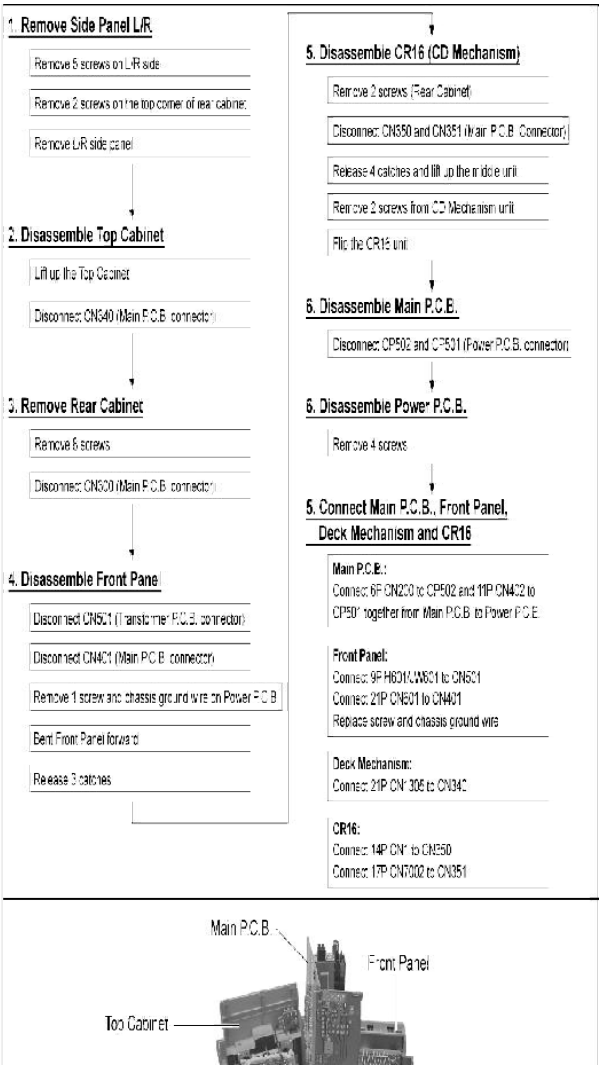
10.4. Checking and Repairing of Panel P.C.B.


1. Remove Side Panel L/R
Remove 5 screws on L/R side
Remove 2 screws on the top corner of rear cabinet
Remove L/R side pane
2. Disassemble Top Cabinet
3. Disassemble Panel P.C.B.
Remove 2 shield plate screws from Panel P.C.B.
Top Cabinet
Panel P.C.B.

10.5. Checking and Repairing of CD Servo and CD Loading P.C.B.


1. Remove Side Panel L/R
Remove 5 screws on L/R side
Remove 2 screws on the top corner of rear cabinet
Remove L/R side panel
2. Disassemble Top Cabinet
Lift up the Top Cabinet
Disconnect CN340 (Main P.C.B. connector)
3. Disassemble Front Pane
Disconnect CN501 (Transformer P.C.B. connector)
Disconnect CN401 (Main P.C.B. connector)
Remove 1 screw and chassis ground wire on Power P.C.B
Bend Front Panel forward
Release 3 catches
4. Disassemble CR16 (CD Mechanism)
Remove 2 screws (Rear Cabinet)
Disconnect CN350 and CN351 (Main P.C.B. Connector)
Release 4 catches and lift up the middle unit
Remove 2 screws from CD Mechanism unit
Flip the CR16 unit
5. Connect Front Panel, Deck Mechanism and CR16
Front Panel:
Connect 9P HSDMM601 to CN501
Connect 21P CN601 to CN401
Replace screw and chassis ground wire
Deck Mechanism:
Connect 21P CN1305 to CN340
CR16:
Connect 14P CN1 to CN350
Connect 17P CN7002 to CN351

10.6. Checking and Repairing of Power P.C.B.


1. Remove Side Panel L/R
Remove 5 screws on L/R side
Remove 2 screws on the top corner of rear cabinet
Remove L/R side panel
2. Disassemble Top Cabinet
Lift up the Top Cabinet
Disconnect CN540 (Main P.C.B. connector)
3. Remove Rear Cabinet
Remove 6 screws
Disconnect CN500 (Main P.C.B. connector)
4. Disassemble Front Pane
Disconnect CN521 (Transformer P.C.B. connector)
Disconnect CN401 (Main P.C.B. connector)
Remove 1 screw and chassis ground wire on Power P.C.B.
Bent Front Panel forward
Release 8 catches
5. Disassemble CR16 (CD Mechanism)
Remove 2 screws (Rear Cabinet)
Disconnect CN350 and CN351 (Main P.C.B. Connector)
Release 4 catches and lift up the middle unit
Remove 2 screws from CD Mechanism unit
Flip the CR16 unit
6. Disassemble Main P.C.B.
Disconnect CP502 and CP501 (Power P.C.B. connector)
6. Disassemble Power P.C.B.
Remove 4 screws
5. Connect Main P.C.B., Front Panel, Deck Mechanism and CR16
Main P.C.B.:
Connect 6P CN200 to CP502 and 11P CN402 to CP501 together from Main P.C.B. to Power P.C.B.
Front Panel:
Connect 9P H601/CN601 to CN501
Connect 21P CN501 to CN401
Replace screw and chassis ground wire
Deck Mechanism:
Connect 21P CN1 306 to CN340
CR16:
Connect 14P CN1 to CN350
Connect 17P CN7002 to CN351
Main P.C.B.
Front Panel
Top Cabinet

11. Procedure for Checking Operation of Individual Parts of Deck Mechanism Unit

11.1. Operation Check with Cassette Tape

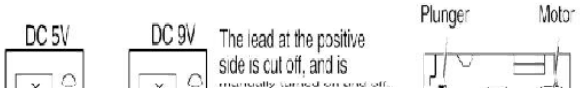
1. Pull up the EJECT lever using a rubber band. (Fig. 6)

2. Supply DC5V to MOTOR. (MOTOR rotates.) (Fig. 5)

3. Insert a cassette tape to the unit.

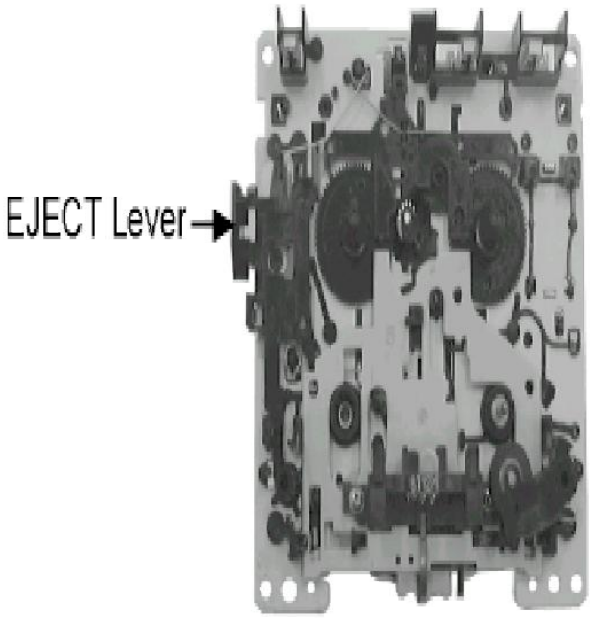
4. Supply DC9V to the plunger, and turn the power ON and OFF. (Power +PL, -PL) (Fig. 5)
   A. FWD PLAY: Supply the plunger power in a flash. (ON: approx. 5msec)
   B. FWD FF: Supply the plunger power in a flash at PLAY mode. (ON: approx. 5msec)
   C. STOP: Supply the plunger power in a flash at FWD FF mode. (ON: approx. 5msec)
   D. REV PLAY: Supply the plunger power in a normal timing at STOP mode. (ON: approx. 200msec)
   E. REV REW: Supply the plunger power in a flash at REV PLAY mode. (ON: approx. 50msec)
   F. STOP: Supply the plunger power in a flash at FF mode. (ON: approx. 50msec)
   Repeat the operation (→ FWD PLAY)
   (Note) Other operation may start if a timing of supplying the plunger power is missed.

11.1.1. Connection Status between Mechanism and Power Supply (Motor, Plunger)



11.1.2. Operative Parts of Mechanism Unit (EJECT lever fitted with rubber band, / Plunger/Rib operation)

Fig. 6



11.2. Operation Check without Cassette Tape

1. Pull up the EJECT lever using a rubber band. (Fig. 6)
2. Supply DC5V to MOTOR. (→ MOTOR rotates.)
3. Lift up the mechanism unit's plunger/rib with the tip of a negative screwdriver, and operate the unit in the same timing as / supplying the power. (Fig. 7) /

Fig. 7

12. Measurement And Adjustments

12.1. Cassette Deck Section

12.1.1. Requirements

- Test tape (QZZCFM) (QZZCWAT)

- Normal blank cassette tape (QZZCRA)
- Digital frequency counter
- Oscilloscope
- Electrical voltmeter
- Headphone jack output jig (Fig. 8)

12.1.2. Setting of Unit

- VOLUME: MAX

12.1.3. Preparations

1. Apply under [9. Assembling and Disassembling].
2. Remove 4 screws from the mechanism unit to disassemble. under [9. Assembling and Disassembling].
3. Connect the headphone jack output jig (Fig. 8) to headphone jack.

Fig. 8

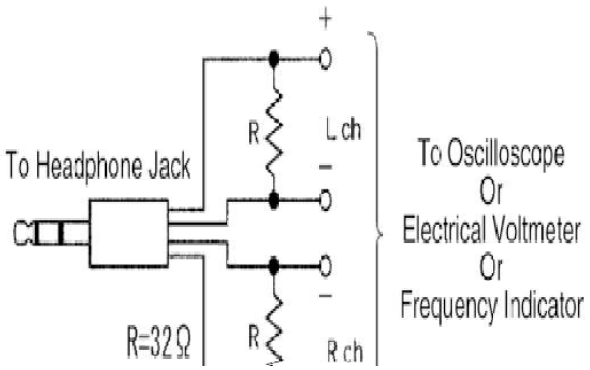
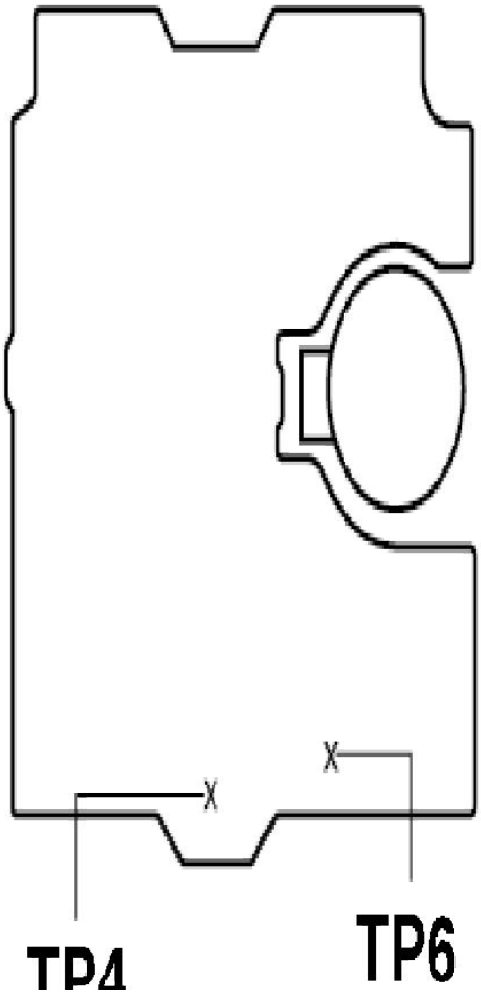


Fig. 9



12.1.4. Tape Speed Adjustment

- Normal speed adjustment (only during forward playback)
(Product reference value: 3,000±90Hz)

1. Connect a frequency indicator. (Fig. 12)

2. Playback the middle portion of the test tape (QZZCWAT).

3. Adjust the motor screw so that the following output level is produced. (Fig. 10)
Adjustment Range: 3,000 ± 90Hz (a constant speed)

Fig. 10

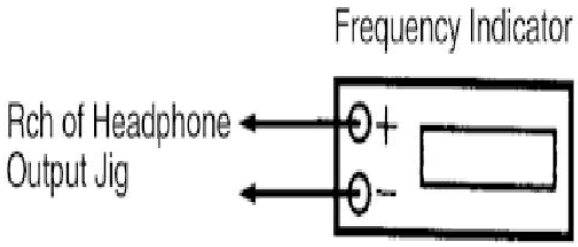
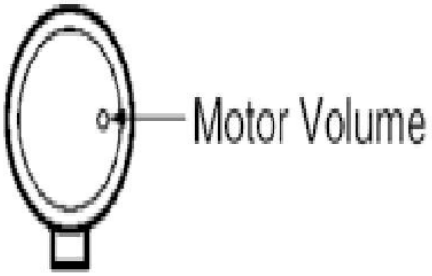


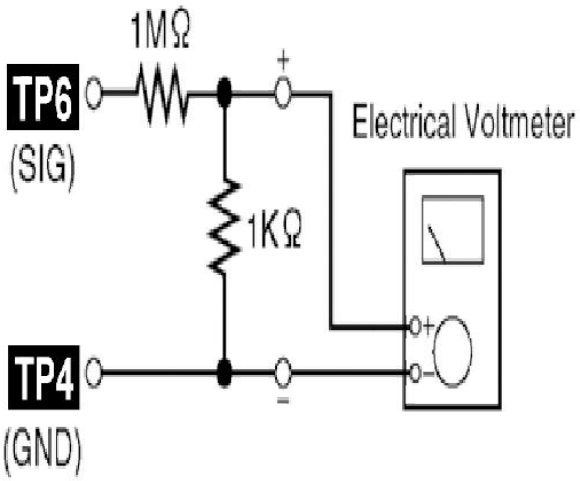
Fig. 11



12.1.5. Bias Voltage Check

1. Connect an electrical voltmeter. (Fig. 9) (Fig. 12)
2. Set the function to “TAPE” position.
3. Insert a normal blank cassette tape (QZZCRA).
4. While pressing and holding down [REC (/)] button, press [TAPE ( )] button to pause the recording mode. (Repeat pressing the buttons till the recording pause mode is activated.)
5. Check that the output level is within the standard range.
   Standard Range: 13.5 ± 4mV

Fig. 12



12.1.6. Bias Frequency Check

1. **Connect a digital frequency counter (Fig. 13).**
2. **Set the function to “TAPE” position.**
3. **Insert a normal blank cassette tape (QZZCRA) and press “REC” mode on main unit.**
4. **Check that the output frequency is within the standard range.**

Standard Value: 98 ±8 kHz

Fig. 13

13. Voltage Measurement & Waveform Chart

Note:

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
  Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point because it may differ from actual measuring value due to difference of Measuring instrument and its measuring condition and product itself.

13.1. Voltage Measurement

13.1.1. CD Loading P.C.B.

13.1.2. CD Servo P.C.B.

13.1.3. Main P.C.B.

13.1.4. Transformer P.C.B.

13.1.5. Deck P.C.B.

13.1.6. Deck Mechanism P.C.B.

13.1.7. Power P.C.B.

13.1.8. Panel P.C.B.

13.2. Waveform Chart

14. Wiring Connection Diagram

15. Block Diagram

16. Notes of Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)
Note :

S1
STOCK switch

S2
PLAY switch

S3
BOTTOM switch

S4
OPEN switch

S5
CHANGE switch

S601
STOP/DEMO switch

S602
MUSIC PORT switch

S603
TUNER/BAND switch

S604
TAPE switch

S605
CD_PLAY switch

S606
POWER switch

S607
CD 5 switch

S608
CHANGE switch

S609
CD_CHECK switch

S610
CD 3 switch

S611
CD 4 switch

S612
OPEN/CLOSE switch

S613
CD 1 switch

S614
CD 2 switch

S615
REC switch

S616
REW switch

S617
H.BASS switch

S618
FWD switch

S971
MODE switch

S972
HALF switch

S973
CR02 switch

S975
RECINH_F switch

S1901
TAPE EJECT switch

S7201
RESET switch

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.
- Importance safety notice :
  Components identified by mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.
- Do not touch the pins of IC, LSI or VLSI with fingers directly.

17. Schematic Diagram

17.1. CD SERVO CIRCUIT

17.2. MAIN CIRCUIT

17.3. PANEL CIRCUIT

17.4. DECK CIRCUIT, DECK MECHANISM CIRCUIT and TAPE EJECT CIRCUIT

17.5. POWER CIRCUIT

17.6. TRANSFORMER CIRCUIT

17.7. CD LOADING CIRCUIT

18. Printed Circuit Board Diagrams

18.1. CD SERVO P.C.B

18.2. MAIN P.C.B

18.3. PANEL P.C.B

18.4. DECK P.C.B, DECK MECHANISM P.C.B and TAPE EJECT P.C.B

18.5. POWER P.C.B

18.6. TRANSFORMER P.C.B

18.7. CD LOADING P.C.B

19. Illustration of IC’s, Transistors and Diodes

20. Terminal Function of IC's

20.1. IC7001 (MN6627954MA) IC SERVO PROCESSOR/DIGITAL SIGNAL PROCESSOR/DIGITAL FILTER D/A CONVERTER

Pin No.	Mark	I/O	Function
1	A11	O	DRAM address signal O/P 11
2	A9	O	DRAM address signal O/P 9
3	A8	O	DRAM address signal O/P 8
4	A7	O	DRAM address signal O/P 7
5	A6	O	DRAM address signal O/P 6
6	A5	O	DRAM address signal O/P 5
7	A4	O	DRAM address signal O/P 4
8	NWE	O	Write Enable Signal (DRAM)
9	NCAS	O	DRAM CAS Control Signal
10	NRAS	O	DRAM ARS Control Signal
11	A3	O	DRAM address Signal O/P 3
12	A2	O	DRAM address Signal O/P 2
13	A1	O	DRAM address Signal O/P 1
14	A0	O	DRAM address Signal O/P 0
15	A10	O	DRAM address Signal O/P 10
16	BA0	N.C.	Motor O/P (0);/Serial I/P
17	BA1	N.C.	Motor O/P (1);/Serial I/P
18	PRAMVSS33	-	GND (DRAM)
19	PRAMVDD15	-	Power Supply Voltage (DRAM)
20	PRAMVDD33	-	Power Supply Voltage (+1.6V)
21	SPOUT	O	Spindle Drive O/P
22	PC	I/O	Spindle motor drive O/P signal serial data/ Monitoring I/P
23	TRVP	O	Traverse Drive O/P (+ve)
24	TRP	O	Tracking Drive O/P (+ve)
25	FOP	O	Focusing Drive O/P (+ve)
26	DVSS1	I	GND

Pin No.	Mark	I/O	Function
27	IOVDD2	I	Digital Power Supply Voltage 2 (I/O)
28	DVDD1	-	Digital Power Supply Voltage 1 (Built-In)
29	SRVMON0	N.C.	Servo Monitor (0) O/P
30	SRVMON1	N.C.	Servo Monitor (1) O/P
31	AVSS2	-	GND
32	OSCIN	I	Oscillating Input
33	CTRCRS	N.C.	Tracking Cross Comparator
34	VREF	-	+Vref Supply Voltage
35	E	I	Tracking Input Signal 1
36	F	I	Tracking Input Signal 2
37	D	I	Focusing Input Signal 4
38	B	I	Focusing Input Signal 2
39	C	I	Focusing Input Signal 3
40	A	I	Focusing Input Signal 1
41	PD	I	APC Amp I/P
42	LD	O	Laser Drive Current O/P
43	CENV	I	Detection Capacitance Connection terminal
44	RFENV	O	RF Envelope O/P
45	RFOUT	O	RF Summing Amp O/P
46	RFIN	I	SGC I/P
47	AVDD2	I	Analog Power Supply voltage 2 (For DSL/PLL)
48	ARFDC	O	AGC Capacitive Connection Terminal
49	ARFOUT	O	AGC Output
50	ARFFB	I	ARF Feedback Signal I/P
51	ARFIN	I	Audio RF Signal I/P
52	DSLF	I	Loop Filter Terminal (For DSL)
53	IREF	I	Reference I/P
54	PLLF	I	PLL Loop Filter Terminal (Phase Compare)
55	PLLF0	O	PLL Loop Filter Terminal (Speed Compare)
56	OUTL\	O	Audio O/P (LCH)
57	AVSS1	I	GND
58	AVDD1	I	Analog Power Supply Voltage 1
59	OUTR	O	Audio O/P (RCH)

Pin No.	Mark	I/O	Function
60	DVSS3	I	GND3 (Digital Circuit)
61	NSRVMONON	I	Servo Motor O/P Enabling
62	EXT0	N.C.	Expansion O/P Port 0
63	EXT1	N.C.	Expansion O/P Port 1
64	EXT2	N.C.	Expansion O/P Port 2
65	FLAG	N.C.	Flag Signal O/P
66	TX	N.C.	Digital Audio Interface O/P signal
67	MCLK	I	Micro-Computer Command Clock I/P
68	MDATA	I	Micro-Computer Data I/P
69	MLD	I	Micro-Computer Load I/P
70	STAT	O	Status Signal O/P
71	BLKCK	O	Subcode Blk Clock
72	NRST	O	LSI Reset Signal
73	DQSYTXT	N.C.	Pack Signal O/P for CD-Text data
74	SMCK	N.C.	Micro-Computer Clock O/P
75	PMCK	N.C.	IOCNT Serial data O/P (Synchronous O/P)
76	DVDD2	-	Digital Power Supply Voltage 2 (+1.5V)
77	IOVDD1	-	Digital Power Supply Voltage 1 (For I/O)
78	DVSS2	-	GND2 (For Digital Circuit)
79	NTEST2	I	Test Mode Setting (ON: H)
80	X2	O	Crystal Oscillating Circuit O/P
81	X1	I	Crystal Oscillating Circuit I/P
82	NTEST	I	Test Mode Setting I/P (ON:H)
83	D2	I/O	Data Sigmal O/P 2
84	D1	I/O	Data Signal O/P 1
85	D0	I/O	Data Signal O/P 0
86	D3	I/O	Data Signal O/P 3
87	D4	I/O	Data Signal O/P 4
88	D5	I/O	Data Signal O/P 5
89	D6	I/O	Data Signal O/P 6
90	D7	I/O	Data Signal O/P 7
91	D15	I/O	Data Signal O/P 15

Pin No.	Mark	I/O	Function
92	D14	I/O	Data Signal O/P 14
93	DRVDD	I	I/O Power Supply Voltage (DRAM)
94	D13	I/O	Data Signal O/P 13
95	D12	I/O	Data Signal O/P 12
96	D11	I/O	Data Signal O/P 11
97	D10	I/O	Data Signal O/P 10
98	D9	I/O	Data Signal O/P 9
99	D8	I/O	Data Signal O/P 8
100	SDRCK	O	Clock Signal O/P

20.2. IC7002 (BA5948FPE2) IC 4CH Drive

Pin No.	Mark	I/O	Function
1	IN2	I	Motor Driver 92 Input
2	PC2	I	Turntable Motor Drive Signal (“L”:ON)
3	IN1	I	Motor Drive (1) Input
4	PC1	-	Traverse Motor Drive Signal (“L”): ON)
5-8	N.C.	-	No Connection
9	PGND1	-	Ground Connection (1) for Drive
10	PVCC1	I	Power Supply (1) for Drive
11	D1-	O	Motor Drive (1) reverse - action output
12	D1+	O	Motor Drive (1) forward - action output
13	D2-	O	Motor Drive (2) reverse - action output
14	D2+	O	Motor Drive (2) forward - action output
15	D3-	O	Motor Drive (3) reverse - action output
16	D3+	O	Motor Drive (3) forward - action output
17	D4-	O	Motor Drive (4) reverse - action output
18	D4+	O	Motor Drive (4) forward - action output
19	PVCC2	-	Power Supply (2) for Driver

Pin No.	Mark	I/O	Function
20	PGND2	-	Ground Connection (2) for Driver
21-24	N.C.	O	No Connection
25	VCC	I	Power Supply terminal
26	VREF	I	Reference Voltage Input
27	IN4	I	Motor Driver (4) Input
28	IN3	I	Motor Driver (3) Input

20.3. IC401 (C2CBYY000164) IC MICRO PROCESSOR

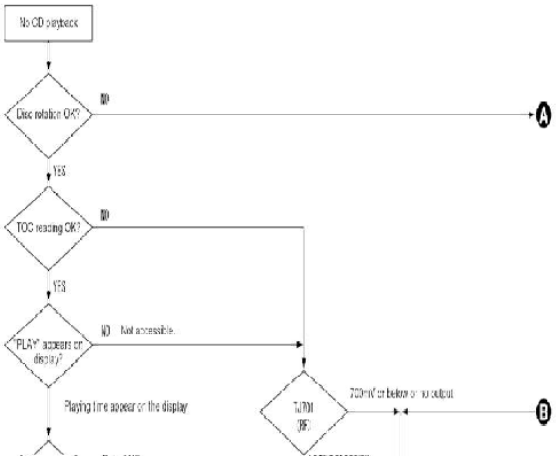
Pin No.	Mark	I/O	Function
1	CHANGE_ / SW	I	Change Switch (CR16)
2	TU_TUNED	I	Tuner tuned signal
3	TU_ST	I	Tuner Stereo signal
4	TU_CK	I	Tuner Serial Clock Input
5	TU_ SDA	I/O	Tuner Serial Data Input
6	N.C.	-	Microcomputer Beat Proof Output 1 (CONTROL)
7	N.C.	-	Microcomputer Beat Proof Output 2 (CONTROL)
8	BYTE	-	External Data Bus Width Select Input (Connect to Ground)
9	EFP_CNVSS	-	Flash Mode Terminal (Connected To Ground)
10	XCIN	I	A/32.768 kHz Sub Clock
11	XCOUT	O	32.768 kHz Sub Clock
12	/RESET/ EFP_RESET	I	Reset Input (ACTIVE L)
13	XOUT	O	10 MHz Main Clock
14	VSS	-	Ground (0V)
15	XIN	I	10 MHz Main Clock
16	VCC	-	Power Supply (+5V)
17	/NMI	-	Connect to Vcc (+5V)
18	RMT	I	Remote Control Input
19	BLKCK	I	CD Block Clock Input (Inverted)
20	HALT	I	AC Failure Detect Input
21	PCONT2	O	HIC Mute
22	EE_CS/	O	EEPROM Chip Select
23	EE_CLK	O	EEPROM CLOCK
24	N.C.	-	No Connection

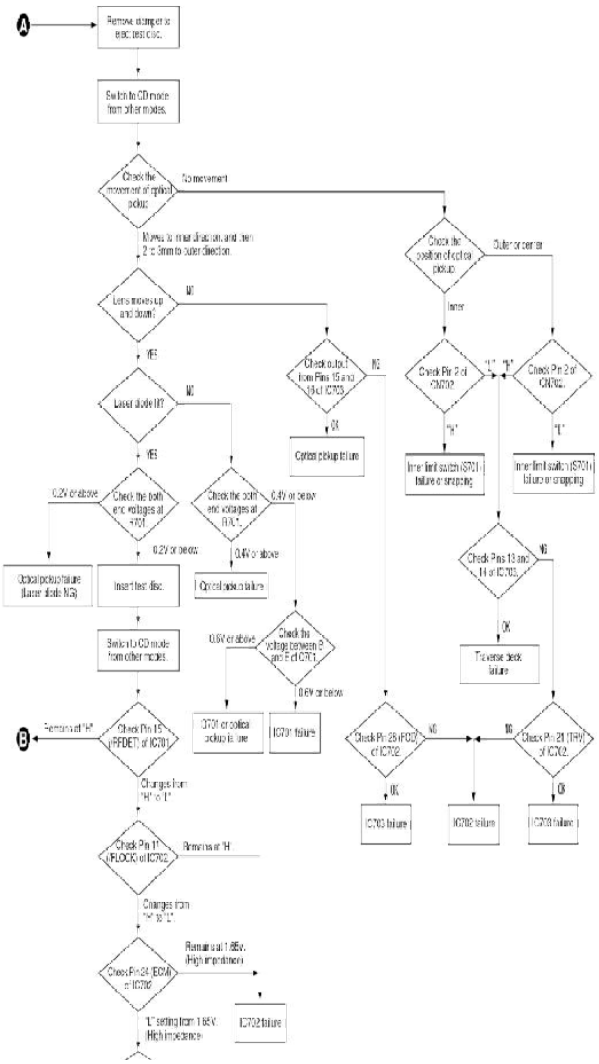
Pin No.	Mark	I/O	Function
25	N.C.	-	No Connection
26	FL_CS1	O	FL Driver Chip Select (Master)
27	N.C.	-	No Connection
28	FL_CLK	O	Serial Clock to FL Driver
29	N.C.	O	Reset Input(ACTIVE L)
30	FL_DOUT	O	Serial Data To FL Driver / (Output)
31	RXD	-	No Connection (For Download Software)
32	TXD	-	No Connection (For Download Software)
33	SCLK	-	No Connection (For Download Software)
34	BUSY	-	No Connection (For Download Software)
35	N.C.	-	No Connection
36	N.C.	-	No Connection
37	N.C.	-	No Connection
38	N.C.	-	No Connection
39	MCLK	O	CD Command CLK Output
40	MUTE_A	O	Audio Mute
41	EPM	-	-
42	MDATA_ / OUT	O	CD Command Data Output
43	MLD	O	CD Command Load Output/
44	N.C.	-	RDS Clock Input
45	N.C.	-	No Connection
46	CE	-	-
47	DCDET	I	DC Detect Input
48	STATUS	I	CD Servo LSI Status Input(Inverted)
49	PCONT	O	Main Transformer Control Output
50	PLAY_SW	I	Play Sw (CR16)
51	STOCK_SW	I	Stock Sw (CR16)
52	OP_SW	I	Open Sw (CR16)
53	POS	I	Position Sw (CR16)
54	BT_SW	I	Bottom Sw (CR16)
55	M1_R	O	Changer Motor 1 Reverse Control
56	M1_F	O	Changer Motor 1 Forward Control

Pin No.	Mark	I/O	Function
57	M2_R	O	Changer Motor 2 Reverse Control
58	M2_F	O	Changer Motor 2 Forward Control
59	REC	O	When record circuit is operatingDURING RECORDING = H
60	N.C.	O	No Connection
61	PHOTO	I	PHOTO (SG Mechanism only)
62	VCC	-	Power Supply (+5V)
63	EE_DAT	I/O	EEPROM DATA
64	VSS	-	Ground (0V)
65	DMT	O	Deck Mute at mecha transitionL=mute OFF, H =mute ON
66	N.C.	-	No Connection
67	ASP_CLK	O	ASP CLK
68	ASP_DAT	O	ASP DATA
69	N.C.	-	No Connection
70	RDS_DAT	-	No Connection
71	RDS_CLK	-	No Connection
72	RDS_RDY	-	No Connection
73	N.C.	-	No Connection
74	N.C.	-	No Connection
75	MOTOR	-	MOTOR
76	PLUNGER	-	PLUNGER
77	N.C.	-	No Connection
78	HP_SW	-	HP_SW
79	REST_SW	-	REST_SW
80	CD_RST	O	CD Reset Output
81	N.C.	-	No Connection
82	N.C.	I	No Connection
83	N.C.	-	No Connection
84	N.C.	I	No Connection
85	P_MTR_R	O	H.Bass LED Control
86	P_MTR_L	-	No Connection
87	TRE_JOG	O	MOTOR Control OutputL =OFF, H=ON
88	BASS_JOG	O	Deck PLUNGER Control OutputL=OFF, H=ON
89	DECK_AD1	I	DECK AD Input 1
90	DECK_AD2	I	DECK AD Input 2
91	REG 1	I	Region Setting 1
92	KEY3	I	KEY3 INPUT
93	KEY2	I	KEY2 INPUT

Pin No.	Mark	I/O	Function
94	KEY1	I	KEY1 INPUT
95	VOL_JOG1	I	Volume Jog 1
96	AVSS	-	Analog Power Supply Input(Connect to GND)
97	N.C.	I	No Connection
98	VREF	-	Reference for A-D (5V)
99	AVCC	-	Analog Power Supply Input
100	Demo	I	No Connection (H = default demo on, L = default demo off.)

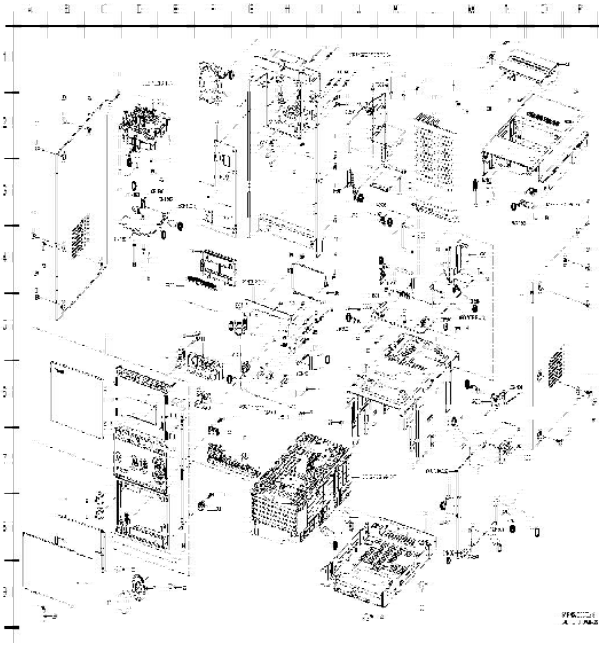
21. Troubleshooting Flowchart (CD Section Circuit)



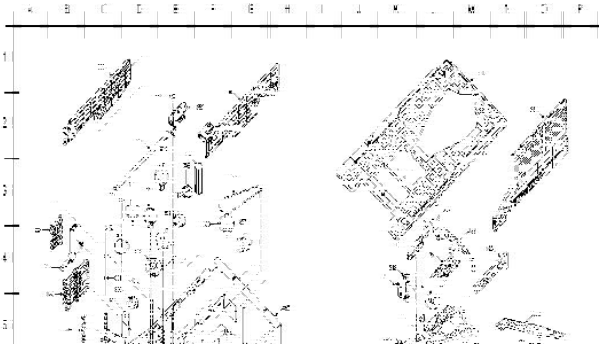


22. Exploded Views

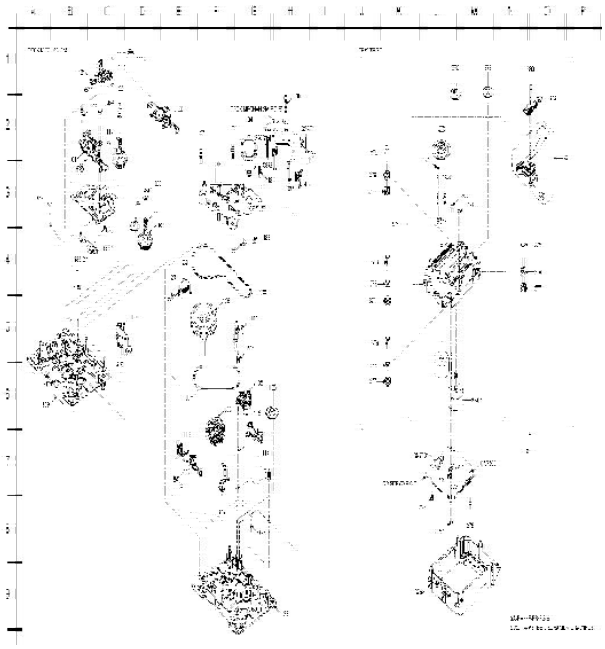
22.1. Cabinet Parts Location



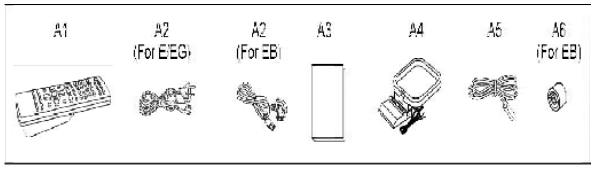
22.2. CD Loading Mechanism Parts Location

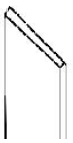


22.3. Deck Mechanism (RAA4402-1S) & Traverse Parts Location



22.4. Packaging





23. Replacement Parts List

Notes:

- Important safety notice:

Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.

- Warning: This product uses a laser diode. Refer to "Precaution of Laser Diode".
ACTUNG:
Die Lasereinheit nicht zerlegen.
Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

- Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.

- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM).

- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- [M] Indicates in the Remarks columns indicates parts supplied by PAVCSG.

- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian	Ur:	Ukraine				

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	L6FALEFH0023	DC FAN	[M]
2	REEV0039-1	17P FFC (CR16-MAIN)	[M]
3	REEV0098	21P FFC (PANEL-MAIN-DECK)	[M]
4	REEX0327-2	FFC WIRE (MAIN-SERVO)	[M]
5	RFKGAPM53EBS	FRONT PANEL ASS'Y	[M]
6	RGK1889-H	INNER CD LID	[M]
7	RGKV0137-S	VOL ORNAMENT	[M]
8	RFKLAPM53EBS	CD LID ORNAMENT ASSY	[M]
9	RGLV0062-Q	LIGHTING TIP	[M]
10	RFKHAPM53EBS	REAR CABINET ASS'Y	[M]EB
10	RKSV0034B-H	REAR PANEL	[M]EG E
11	RGUV0141-S	5CD BUTTON	[M]
12	RGUV0142-S	CASS EJECT BUTTON	[M]
13	RGUV0143-S	FUNCTION BUTTON	[M]
14	RGUV0144A-S	POWER BUTTON	[M]
15	RGUV0145-S	REC/STOP BUTTON	[M]
16	RGWV0040-S	BASS/TREBLE KNOB	[M]
17	RGWV0041-S	VOLUME KNOB	[M]
19	RHD26046-L	SCREW	[M]
20	RHD30007-1SJ	SCREW	[M]
21	RHD30115-3	SCREW	[M]
22	RHGV0008	LEG CUSHION	[M]
23	RKF0688-SJ	CASS HOLDER	[M]
24	RKMV0059A-S	TOP PANEL	[M]
25	RKMV0061-S	SIDE PANEL L	[M]
26	RKMV0062-S	SIDE PANEL R	[M]
27	RMB0448-J	LOCK ROD SPRING	[M]
28	RMB0780-1	CASS OPEN SPRING	[M]
29	RMBV0045	CD LID SPRING	[M]
30	RMK0595-2	BOTTOM CHASSIS	[M]
31	RMKV0060	INNER CHASSIS	[M]
32	RMM0163-1	CASSETTE LOCK ROD	[M]
33	RMN0780	CD LID SUPPORT	[M]
34	RMNV0062	FL HOLDER	[M]
35	RMYV0057	HEATSINK SMALL	[M]
36	RSCV0054	FL REAR SHIELD	[M]
37	RSCV0068	REAR SHIELD	[M]
38	RUS757ZAA	CASS HALF SPRING	[M]
39	RXGX0002	DAMPER GEAR	[M]
40	RXXV0041A	HEAT SINK UNIT	[M]
41	XTB3+10JFJ	SCREW	[M]
42	XTB3+8JFJ	SCREW	[M]
43	XTV3+10GFJ-M	SCREW	[M]
44	XTW3+15TFJ	SCREW	[M]
45	XTWS3+6TFJ	SCREW	[M]
		CASSETTE DECK	
101	RED0067-2	R/P HEAD BLOCK UNIT	[M]
103	RDG0300	REEL BASE GEAR	[M]
104	RDG0301	WINDING RELAY GEAR	[M]
105	RDK0026-4	MAIN GEAR	[M]
107	RDV0033-4	WINDING BELT	[M]
108	RDV0064-1	CAPSTAN BELT	[M]
110	RMB0312	TRIGGER LEVER SPRING	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
111	RMB0400	REEL SPRING	[M]
112	RMB0403	HEAB PANEL SPRING	[M]
113	RMB0404	BRAKE ROD SPRING	[M]
114	RMB0406-5	FR LEVER SPRING	[M]
115	RMB0408	THRUST SPRING	[M]
116	RML0370-4	TRIGGER LEVER	[M]
117	RML0371	FR LEVER	[M]
118	RML0372-2	WINDING LEVER	[M]
119	RML0374-2	EJECT LEVER	[M]
120	RMM0131-1	BRAKE ROD	[M]
121	RMM0133-1	EJECT ROD	[M]
122	RMQ0519	REEL HUB	[M]
123	RMS0398-1	MOVING CORE	[M]
124	RXQ0470-2	PLUNGER	[M]
125	RMC0061	PACK SPRING	[M]
126	RXF0061-1	FLYWHEEL F ASS'Y	[M]
128	RXG0040	FF RELAY GEAR ASS'Y	[M]
129	RMK0283A-2	SUB-CHASSIS	[M]
130	RXL0124	PINCH ROLLER F ASS'Y	[M]
130-1	RMB0401	PINCH ARM SPRING F	[M]
132	RXL0126	WINDING ARM ASS'Y	[M]
133	RXQ0412-3	HEAD PANEL ASS'Y	[M]
133-1	RMB0405-1	FR ROD SPRING	[M]
133-2	RMM0132-1	FR ROD	[M]
134	REM0120	CAP MOTOR ASS'Y	[M]
135	RHD26022-1	MOTOR SCREW	[M]
136	XTW2+5LFJ	HEAD BLOCK UNIT SCRE	[M]
137	XTW26+10SFJ	SUB-CHASSIS SCREW	[M]
138	XYC2+JF17FJ	PCB EARTH SCREW	[M]
139	RFKJSTR280PP	CHASSIS ASS'Y	[M]
		TRAVERSE DECK	
301	RDG0519-1	MAIN GEAR	[M]
302	RDG0520	SPEED UP GEAR	[M]
303	RDG0521	REVERSE GEAR	[M]
304	RDG0522	GENEVA GEAR	[M]
305	RDG0523	HOR RELAY GEAR	[M]
306	RDG0525	CROWN GEAR	[M]
307	RDG0526	TRAY RELAY GEAR	[M]
308	RDG0527	UD PULLEY GEAR	[M]
309	RDG0528	HOR SPEED DOWN GEAR	[M]
310	RDG0529	HOR SPEED DOWN GEAR	[M]
311	RDG0530-1	DPIM IMPORT GEAR	[M]
312	RDG0531-1	LOAD RELAY GEAR	[M]
313	RDG0532	LOAD GEAR	[M]
314	RDG0535	UD SPEED DOWN GEAR	[M]
315	RDG0534	UD SPEED DOWN GEAR	[M]
316	RDG0536	SELECT SPEED DOWN GE	[M]
317	RDG0537-1	SELECT DRIVE GEAR	[M]
318	RDG0538-1	CHANGE GEAR	[M]
319	RDG0539	UD DRIVE GEAR	[M]
320	RDG0540	TIMING GEAR	[M]
321	RDG0542	TRAY GEAR	[M]
322	RDG0543	HOR PULLEY GEAR	[M]
323	RDV0068	HOR BELT	[M]
324	RDV0069	UD BELT	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
325	RME0344-1	UD ASSIST SPRING	[M]
327	RME0363-1	LIMIT SPRING	[M]
328	RME0368-1	MAIN GEAR SPRING	[M]
329	RML0616	SPEED UP LOCK	[M]
330	RML0617-2	SEPARATE LEVER 1	[M]
331	RML0618-1	SEPARATE LEVER 2	[M]
332	RML0619-1	UD. CONNECTION LEVER	[M]
333	RML0620	TRV.CONNECT LEVER	[M]
334	RML0621-3	TRAY CHANGE LEVER	[M]
335	RML0702	TRAY LOCK LEVER	[M]
336	RML0623-1	OPEN SW. LEVER	[M]
337	RML0624	CHG. LEVER	[M]
338	RML0701	TRAY STOPPER	[M]
339	RMM0239-1	UD RACK L	[M]
340	RMM0240-1	UD.RACK (R)	[M]
341	RMM0290-1	TRV SLIDE PLATE (L)	[M]
342	RMM0242-3	TRV SLIDE PLATE (R)	[M]
343	RMM0243-2	SELECT RACK PART	[M]
344	RMM0244	SELECT GUIDE	[M]
345	RMQ1051-2	PITCH PLATE PART	[M]
346	RMQ1460-1	UD BASE PART	[M]
347	RMQ1056	TRAY GUIDE (L)	[M]
348	RMQ1057	TRAY GUIDE (R)	[M]
349	RMQ1058	GEAR HOLDER	[M]
350	RMQ1059-2	TOP COVER	[M]
351	RMQ1060	CLAMP GUIDE	[M]
352	RMQ1061	TG.PLATE	[M]
353	RMR0334	FIXTURE	[M]
354	RMR0624-W5	CLAMPER	[M]
355	RMR1714A-H	TRAY	[M]
356	RMR1714B-H	TRAY	[M]
357	RMR1714C-H	TRAY	[M]
358	RMR1714D-H	TRAY	[M]
359	RMR1714E-H	TRAY	[M]
360	RFKNAPM77MDS	MECHA BASE ASS'Y	[M]
361	RMS0762	TRAY GEAR SHAFT	[M]
362	RXG0053	TRAY DRIVE GEAR ASSY	[M]
363	RXQ0803	LOADING MOTOR ASSY	[M]
364	RXQ0804	UD MOTOR ASSY	[M]
365	XTB3+10JFJ	SCREW	[M]
366	RMC0472	TRAY SPRING	[M]
367	RHD26045-L	SCREW	[M]
368	RME0439	TRAY PUSH SPRING	[M]
369	RHM0001	MAGNET	[M]
370	RMM0218-1	TRAVERSE DRIVE RACK	[M]
371	RAE0157A-V	TRV UNIT WITHOUT SER	[M]
372	RDG0455	TRAVERSE GEAR (A)	[M]
373	RDG0456-1	TRAVERSE GEAR (B)	[M]
374	RFKNCT121157	TRAVERSE BASE ASS'Y	[M]
374-1	RXQ0632	TRAVERSE MOTOR UNIT	[M]
374-2	XQN17+C28FJ	SCREW	[M]
375	XTN2+6GFJ	SCREW	[M]
376	RMG0703-R	FLOATING RUBBER	[M]
377	RME0109	FLOATING SPRING	[M]
378	RMR1427-X	MIDDLE CHASSIS	[M]
379	RMS0757-1	FIXED PIN	[M]
380	SNSD38-1	SCREW	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
381	RXQ0999	OPU UNIT	[M]
		Printed Circuit Board	
	REPV0082A	CD SERVO P.C.B	[M] RTL
	REPV0086B	MAIN P.C.B / POWER P.C.B	[M] RTL
	REPV0087B	PANEL P.C.B / TRANSFORMER P.C.B	[M] RTL (E/EG)
	REPV0087C	PANEL P.C.B / TRANSFORMER P.C.B	[M] RTL (EB)
	REPV0016B	DECK P.C.B / TAPE EJECT P.C.B	[M] RTL
	REPX0321H	DECK MECHANISM P.C.B	[M] RTL
	REPV0087A	TRANSFORMER P.C.B	[M] RTL
	REP3569A	CD LOADING P.C.B	[M] RTL
		INTEGRATED CIRCUITS	
IC11	C0GAG0000007	IC DRIVER	[M]
IC21	C0GAG0000007	IC DRIVER	[M]
IC201	C1BB00001121	IC ASP	[M]
IC202	C0AABB000125	IC OP AMP	[M]
IC401	C2CBYY000164	IC MICRO-PROCESSOR	[M]
IC403	C0DBZGC00067	IC REGULATOR	[M]
IC405	C1BB00000943	IC RDS	[M]
IC501	C5ZAZ0000083	IC POWER HIC	[M]
IC502	C0DAZYY00006	IC DUAL REGULATOR	[M]
IC503	C0DAZYY00005	IC 3.3V REGULATOR	[M]
IC601	C0HBB0000057	IC FL DRIVER	[M]
IC971	CNB13030R2AU	IC PHOTO INTERUPTOR	[M]
IC1000	C1AA00000612	IC ANALOG SW	[M]
IC1001	AN7326K	IC DECK R/P	[M]
IC7001	MN6627954MA	IC LSI	[M]
IC7002	BA5948FPE2	IC 4 CH DRIVE	[M]
		TRANSISTORS	
Q1	B3NAA0000098	TRANSISTOR	[M]
Q205	B1ABGC000005	TRANSISTOR	[M]
Q206	B1ABGC000005	TRANSISTOR	[M]
Q207	B1ABGC000005	TRANSISTOR	[M]
Q208	B1ABGC000005	TRANSISTOR	[M]
Q209	B1ABCF000079	TRANSISTOR	[M]
Q210	B1ABCF000079	TRANSISTOR	[M]
Q211	B1ABGC000005	TRANSISTOR	[M]
Q212	B1ABGC000005	TRANSISTOR	[M]
Q301	B1ABCF000079	TRANSISTOR	[M]
Q302	B1ABCF000079	TRANSISTOR	[M]
Q303	B1ACKD000006	TRANSISTOR	[M]
Q304	B1ABCF000079	TRANSISTOR	[M]
Q480	B1ADCE000012	TRANSISTOR	[M]
Q501	2SB0621AHA	TRANSISTOR	[M]
Q502	B1ABGC000005	TRANSISTOR	[M]
Q505	B1ACCF000094	TRANSISTOR	[M]
Q506	B1BCCG000002	TRANSISTOR	[M]
Q508	B1ABCF000079	TRANSISTOR	[M]
Q509	B1ABCF000079	TRANSISTOR	[M]
Q515	B1GBCFJJ0044	TRANSISTOR	[M]
Q519	B1ABCF000176	TRANSISTOR	[M]
Q524	B1BABD000001	TRANSISTOR	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
Q1101	B1ABGC000005	TRANSISTOR	[M]
Q1201	B1ABGC000005	TRANSISTOR	[M]
Q1302	B1GDCFJJ0002	TRANSISTOR	[M]
Q1303	B1GBCFGH0001	TRANSISTOR	[M]
Q1304	B1GDCFGH0002	TRANSISTOR	[M]
Q1309	B1AAGC000006	TRANSISTOR	[M]
Q1310	B1AAGC000006	TRANSISTOR	[M]
Q1312	B1ABCF000011	TRANSISTOR	[M]
Q1314	B1GDCFGH0002	TRANSISTOR	[M]
Q1315	B1ACKD000006	TRANSISTOR	[M]
Q1316	2SD09650RA	TRANSISTOR	[M]
Q1317	B1ABGC000005	TRANSISTOR	[M]
Q7601	B1ADCF000001	TRANSISTOR	[M]
QR201	B1GDCFJJ0047	CHIP TRANSISTOR	[M]
QR305	B1GBCFGG0030	CHIP TRANSISTOR	[M]
QR306	B1GBCFGG0030	CHIP TRANSISTOR	[M]
QR402	B1GBCFLL0037	CHIP TRANSISTOR	[M]
QR405	B1GDCFGG0026	CHIP TRANSISTOR	[M]
QR480	B1GBCFJJ0051	CHIP TRANSISTOR	[M]
QR503	B1GBCFJJ0007	CHIP TRANSISTOR	[M]
QR522	B1GBCFJJ0044	DIGITAL TRANSISTOR	[M]
		DIODES	
D201	MA2J72800L	DIODE	[M]
D202	MA2J72800L	DIODE	[M]
D203	B0ACCK000005	DIODE	[M]
D204	B0ACCK000005	DIODE	[M]
D301	B0ACCK000005	DIODE	[M]
D302	B0ADCJ000020	DIODE	[M]
D351	B0ACCK000005	DIODE	[M]
D401	MA2J72900L	DIODE	[M]
D402	B0ACCK000005	DIODE	[M]
D403	B0ACCK000005	DIODE	[M]
D501	B0ACCK000005	DIODE	[M]
D502	B0EAMM000038	DIODE	[M]
D503	B0EAMM000038	DIODE	[M]
D504	B0EAMM000038	DIODE	[M]
D505	B0EAMM000038	DIODE	[M]
D506	B0EAKM000117	DIODE	[M]
D507	B0EAKM000117	DIODE	[M]
D508	B0BC026A0007	DIODE	[M]
D509	B0ACCK000005	DIODE	[M]
D510	B0EAKM000117	DIODE	[M]
D511	B0EAKM000117	DIODE	[M]
D512	B0EAKM000117	DIODE	[M]
D513	B0EAKM000117	DIODE	[M]
D516	B0EAKM000117	DIODE	[M]
D517	B0EAKM000117	DIODE	[M]
D518	B0EAKM000117	DIODE	[M]
D519	B0EAKM000117	DIODE	[M]
D520	B0EAKM000117	DIODE	[M]
D523	B0ACCK000005	DIODE	[M]
D528	B0ACCK000005	DIODE	[M]
D529	B0ACCK000005	DIODE	[M]
D537	B0ACCK000005	DIODE	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
D538	B0BC01200019	DIODE	[M]
D601	B0BC6R700006	DIODE	[M]
D602	B3AAA0000489	DIODE	[M]
D971	MA2C16500E	DIODE	[M]
D1301	B0ACCK000005	DIODE	[M]
D7650	MAZ80560ML	DIODE	[M]
LB320	J0JBC0000015	CHIP INDUCTOR	[M]
LB321	J0JBC0000015	CHIP INDUCTOR	[M]
		VARIABLE RESISTORS	
VR601	K9AA024Y0001	VR VOLUME ENCODER	[M]
VR602	EVEGE1F3012B	VR VOLUME ENCODER	[M]
VR603	EVEGE1F3012B	VR VOLUME ENCODER	[M]
		SWITCHES	
S1	K0L1BA000065	SW STOCK	[M]
S2	K0L1BA000065	SW PLAY	[M]
S3	K0L1BA000078	SW BOTTOM	[M]
S4	RSH1A045-1A	SW OPEN	[M]
S5	K0L1BA000065	SW CHANGE	[M]
S601	EVQ21405RJ	SW STOP/DEMO	[M]
S602	EVQ21405RJ	SW MUSIC PORT	[M]
S603	EVQ21405RJ	SW TUNER/BAND	[M]
S604	EVQ21405RJ	SW TAPE	[M]
S605	EVQ21405RJ	SW CD_PLAY	[M]
S606	EVQ21405RJ	SW POWER	[M]
S607	EVQ21405RJ	SW CD 5	[M]
S608	EVQ21405RJ	SW CHANGE	[M]
S609	EVQ21405RJ	SW CD_CHECK	[M]
S610	EVQ21405RJ	SW CD 3	[M]
S611	EVQ21405RJ	SW CD 4	[M]
S612	EVQ21405RJ	SW OPEN/CLOSE	[M]
S613	EVQ21405RJ	SW CD 1	[M]
S614	EVQ21405RJ	SW CD 2	[M]
S615	EVQ21405RJ	SW REC	[M]
S616	EVQ21405RJ	SW REW	[M]
S617	EVQ21405RJ	SW H.BASS	[M]
S618	EVQ21405RJ	SW FWD	[M]
S971	K0J1BB000017	SW MODE	[M]
S972	K0J1BB000021	SW HALF	[M]
S973	K0J1BB000021	SW CR02	[M]
S975	K0J1BB000021	SW RECINH_F	[M]
S1901	EVQ21405RJ	SW TAPE EJECT	[M]
S7201	RSH1A048-A	SW RESET	[M]
		CONNECTORS	
CN1	K1MN14BA0004	14P CONNECTOR	[M]
CN200	K1KB06B00038	6P CONNECTOR	[M]
CN300	K1KA02AA0186	2P FAN CONNECTOR	[M]
CN340	K1MN21A00031	21P CONNECTOR	[M]
CN350	K1MN14C00004	14P FFC CONNECTOR	[M]
CN351	K1MN17C00002	17P FFC CONNECTOR	[M]
CN401	K1MN21A00031	21P CONNECTOR	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
CN402	K1KB11A00020	11P CONNECTOR	[M]
CN501	K1KA10AA0319	10P CONNECTOR	[M]
CN501	K1MP09A00002	9P WIRE HOLDER	[M]
CN601	K1MN21B00010	21P FFC CONNECTOR	[M]
CN1305	K1MN21B00010	21P FFC CONNECTOR	[M]
CN7001	K1MN16B00154	16P CONNECTOR	[M]
CN7002	K1MN17B00032	17P CONNECTOR	[M]
CP501	K1KA11AA0031	11P CONNECTOR	[M]
CP502	K1KA06AA0031	6P CONNECTOR	[M]
CP1301	K1MY05AA0043	5P CONNECTOR SOCKET	[M]
CP1902	K1KA09BA0153	9P CONNECTOR	[M]
CS971	RJU071H09M1	9P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L291	J0JBC0000019	CHIP INDUCTOR	[M]
L292	J0JBC0000019	CHIP INDUCTOR	[M]
L295	J0JBC0000019	CHIP INDUCTOR	[M]
L301	G0A200D00002	RF CHOKE COIL	[M]
L401	G0C3R3JA0027	COIL	[M]
L501	G0B371HA0005	LINE FILTER	[M]
L503	G0AR76Y00003	CHOKE COIL	[M]
L504	G0AR76Y00003	CHOKE COIL	[M]
L601	G0C101JA0052	INDUCTOR	[M]
L602	G0C101JA0052	INDUCTOR	[M]
L603	G0C3R3JA0027	COIL	[M]
L1301	G2ZZ00000024	BIAS OCS COIL	[M]
L1302	G0C470JA0052	RF CHOKE COIL	[M]
T501	G4CYAYY00077	POWER TRANSFORMER	[M]
T502	RTP1H3E002	SUB TRANSFORMER	[M]
		COMPONENT COMBINATIONS	
Z301	ENG07811QF	TUNER PACK	[M]
Z501	ERZVA5Z471	ZENER	[M]
Z601	B3RAB0000046	REMOCON SENSOR	[M]
		RELAY	
RL501	K6B1ADA00011	RELAY	[M]
		OSCILLATORS	
X401	H2B100500004	CERAMIC RESONATOR	[M]
X402	H0A327200111	CRYSTAL OSCILLATOR	[M]
X461	H0H433400002	CRYSTAL OSCILLATOR	[M]
X7201	H2B169500005	CRYSTAL OSCILLATOR	[M]
		DISPLAY TUBE	
FL601	A2BB00000157	FL DISPLAY	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		FUSES	
F1	K5D102BLA013	FUSE	[M]
		FUSE HOLDERS	
FC1	K3GE1ZZ00001	FUSE HOLDER	[M]
FC2	K3GE1ZZ00001	FUSE HOLDER	[M]
		FUSE PROTECTOR	
FP501	K5G402A00025	FUSE PROTECTOR	[M]
FP502	K5G102A00039	FUSE PROTECTOR	[M]
		HOLDERS	
H501	K1YF10000003	10P CONNECTOR	[M]
H601	RMR0318	9P WIRE HOLDER	[M]
		JACKS	
JK201	K2HC103B0162	JK HEADPHONE	[M]
JK503	K2AA2B000015	JK AC INLET	[M]
JK501	K4BC04B00086	JK RED/BLACK SPEAKER	[M]
JK601	K2HC1YYA0006	JK MUSIC PORT	[M]
		EARTH TERMINALS	
E501	SNE1004-3	EARTH TERMINAL	[M]
E502	SNE1004-3	EARTH TERMINAL	[M]
		WIRES	
WR1308	RWJ0102110SS	2P (M0T0R WIRE) (WR1308A/B)	[M]
WR1903	RWJ0102050KR	2P (MOTOR WIRE)	[M]
JW501	REXV0065	10P WIRE	[M]
JW601	RWJ0209150XQ	9P WIRE	[M]
JW602	REZ1372	EARTH WIRE	[M]
		PACKING MATERIALS	
P1	RPGV0274	PACKING CASE	[M]
P2	RPNV0096	POLYFOAM	[M]
P3	RPHV0001-1	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	N2QAYB000008	REMOTE CONTROL	[M]
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]
A2	K2CQ2CA00002	AC CORD	[M]EG E
A2	K2CT3CA00004	AC CORD	[M]EB
A3	RQTV0099-D	O/I BOOK (Ge/It/Fr)	[M]EG
A3	RQTV0100-H	O/I BOOK (Du/Da/Sw)	[M]EG
A3	RQTV0101-E	O/I BOOK (Sp/Po/Cz)	[M]E

Ref. No.	Part No.	Part Name & Description	Remarks
A3	RQTV0102-B	O/I BOOK (En)	[M]EB E
A4	N1DAAAA00001	AM LOOP ANTENNA	[M]
A5	RSA0007-L	FM ANTENNA WIRE	[M]
A6	K1YZ02000013	ANT ADAPTER	[M]EB
		RESISTORS	
R201	ERJ3GEYJ682V	6.8K 1/16W	[M]
R202	ERJ3GEYJ682V	6.8K 1/16W	[M]
R203	D0GB392JA007	3.9K 1/16W	[M]
R204	D0GB392JA007	3.9K 1/16W	[M]
R205	D0GB392JA007	3.9K 1/16W	[M]
R206	D0GB392JA007	3.9K 1/16W	[M]
R207	ERJ3GEY0R00V	0 1/16W	[M]
R208	ERJ3GEY0R00V	0 1/16W	[M]
R209	ERJ3GEYJ103V	10K 1/16W	[M]
R210	ERJ3GEYJ103V	10K 1/16W	[M]
R211	D0GB562JA007	5.6K 1/16W	[M]
R212	D0GB562JA007	5.6K 1/16W	[M]
R213	D0GB123JA007	12K 1/16W	[M]
R214	D0GB123JA007	12K 1/16W	[M]
R215	ERJ3GEYJ102V	1K 1/16W	[M]
R216	ERJ3GEYJ102V	1K 1/16W	[M]
R217	D0GB183JA007	18K 1/16W	[M]
R218	D0GB183JA007	18K 1/16W	[M]
R219	D0GB272JA007	2.7K 1/16W	[M]
R220	D0GB272JA007	2.7K 1/16W	[M]
R221	D0GB152JA007	1.5K 1/16W	[M]
R222	ERD2FCVJ4R7T	4.7 1/4W	[M]
R223	D0GB104JA007	100K 1/16W	[M]
R224	D0GB562JA007	5.6K 1/16W	[M]
R225	D0GB123JA007	12K 1/16W	[M]
R226	D0GB153JA007	15K 1/16W	[M]
R227	D0GB104JA007	100K 1/16W	[M]
R230	D0GB272JA007	2.7K 1/16W	[M]
R231	D0GB272JA007	2.7K 1/16W	[M]
R236	ERJ3GEYJ101V	100 1/16W	[M]
R237	D0GB563JA007	56K 1/16W	[M]
R238	D0GB273JA007	27K 1/16W	[M]
R239	D0GB104JA007	100K 1/16W	[M]
R240	D0GB104JA007	100K 1/16W	[M]
R241	ERJ3GEYJ822V	8.2K 1/16W	[M]
R242	ERJ3GEYJ822V	8.2K 1/16W	[M]
R243	D0GB823JA007	82K 1/16W	[M]
R244	D0GB823JA007	82K 1/16W	[M]
R245	D0GB104JA007	100K 1/16W	[M]
R246	D0GB104JA007	100K 1/16W	[M]
R247	ERJ3GEYJ102V	1K 1/16W	[M]
R248	ERJ3GEYJ102V	1K 1/16W	[M]
R249	ERJ3GEYJ102V	1K 1/16W	[M]
R250	ERJ3GEYJ102V	1K 1/16W	[M]
R251	D0GB104JA007	100K 1/16W	[M]
R252	D0GB104JA007	100K 1/16W	[M]
R253	D0GB221JA007	220 1/16W	[M]
R254	D0GB221JA007	220 1/16W	[M]
R255	D0GB153JA007	15K 1/16W	[M]
R256	D0GB153JA007	15K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R257	ERJ3GEYJ102V	1K 1/16W	[M]
R258	ERJ3GEYJ102V	1K 1/16W	[M]
R259	D0GB104JA007	100K 1/16W	[M]
R260	D0GB104JA007	100K 1/16W	[M]
R261	D0GB472JA041	4.7K 1/16W	[M]
R262	D0GB472JA041	4.7K 1/16W	[M]
R263	D0GB222JA041	2.2K 1/16W	[M]
R264	D0GB222JA041	2.2K 1/16W	[M]
R265	D0GB220JA007	22 1/16W	[M]
R266	D0GB220JA007	22 1/16W	[M]
R267	D0GB152JA007	1.5K 1/16W	[M]
R268	D0GB152JA007	1.5K 1/16W	[M]
R269	D0GB220JA007	22 1/16W	[M]
R270	D0GB220JA007	22 1/16W	[M]
R271	ERJ3GEYJ102V	1K 1/16W	[M]
R272	ERJ3GEYJ102V	1K 1/16W	[M]
R273	D0GB332JA007	3.3K 1/16W	[M]
R274	D0GB332JA007	3.3K 1/16W	[M]
R275	D0GB472JA041	4.7K 1/16W	[M]
R276	D0GB472JA041	4.7K 1/16W	[M]
R277	D0GB392JA007	3.9K 1/16W	[M]
R278	D0GB392JA007	3.9K 1/16W	[M]
R301	ERJ3GEYJ824V	820K 1/16W	[M]
R302	ERJ3GEYJ103V	10K 1/16W	[M]
R303	D0GB563JA007	56K 1/16W	[M]
R304	ERJ3GEYJ824V	820K 1/16W	[M]
R305	D0GB562JA007	5.6K 1/16W	[M]
R306	D0GB472JA041	4.7K 1/16W	[M]
R307	ERJ3GEYJ103V	10K 1/16W	[M]
R308	ERJ3GEYJ103V	10K 1/16W	[M]
R309	D0GB563JA007	56K 1/16W	[M]
R310	D0AF180JA039	18 1/4W	[M]
R311	D0GB101JA007	100 1/16W	[M]
R312	D0GB563JA007	56K 1/16W	[M]
R320	D0GB221JA041	220 1/16W	[M]
R321	D0GB222JA041	2.2K 1/16W	[M]
R322	D0GB221JA041	220 1/16W	[M]
R323	D0GB221JA041	220 1/16W	[M]
R324	ERJ3GEYJ102V	1K 1/16W	[M]
R325	ERJ3GEYJ102V	1K 1/16W	[M]
R330	D0GB472JA041	4.7K 1/16W	[M]
R331	D0GB223JA041	22K 1/16W	[M]
R332	D0GB223JA041	22K 1/16W	[M]
R351	ERD2FCVG100T	10 1/4W	[M]
R352	D0GB121JA007	120 1/16W	[M]
R353	D0GB101JA007	100 1/16W	[M]
R354	ERJ3GEYJ102V	1K 1/16W	[M]
R355	ERJ3GEYJ102V	1K 1/16W	[M]
R356	ERJ3GEYJ102V	1K 1/16W	[M]
R357	ERJ3GEYJ102V	1K 1/16W	[M]
R358	ERJ3GEYJ102V	1K 1/16W	[M]
R359	ERJ3GEYJ102V	1K 1/16W	[M]
R401	ERJ3GEYJ103V	10K 1/16W	[M]
R402	D0GB101JA007	100 1/16W	[M]
R403	D0GB473JA041	47K 1/16W	[M]
R404	ERJ3GEYJ102V	1K 1/16W	[M]
R405	ERJ3GEYJ103V	10K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R406	D0GB472JA041	4.7K 1/16W	[M]
R408	D0GB101JA007	100 1/16W	[M]
R409	D0GB101JA007	100 1/16W	[M]
R410	ERJ3GEYJ102V	1K 1/16W	[M]
R411	ERJ3GEYJ102V	1K 1/16W	[M]
R412	D0GB222JA041	2.2K 1/16W	[M]
R413	D0GB101JA007	100 1/16W	[M]
R414	D0GB101JA007	100 1/16W	[M]
R415	D0GB101JA007	100 1/16W	[M]
R416	D0GB101JA007	100 1/16W	[M]
R417	D0GB101JA007	100 1/16W	[M]
R418	D0GB101JA007	100 1/16W	[M]
R419	D0GB101JA007	100 1/16W	[M]
R420	D0GB101JA007	100 1/16W	[M]
R421	D0GB101JA007	100 1/16W	[M]
R422	D0GB101JA007	100 1/16W	[M]
R423	D0GB472JA041	4.7K 1/16W	[M]
R424	D0GB472JA041	4.7K 1/16W	[M]
R425	D0GB473JA041	47K 1/16W	[M]
R426	D0GB472JA041	4.7K 1/16W	[M]
R427	D0GB101JA007	100 1/16W	[M]
R428	D0GB472JA041	4.7K 1/16W	[M]
R429	D0GB101JA007	100 1/16W	[M]
R430	ERJ3GEYJ102V	1K 1/16W	[M]
R431	D0GB101JA007	100 1/16W	[M]
R433	D0GB101JA007	100 1/16W	[M]
R435	ERJ3GEYJ102V	1K 1/16W	[M]
R436	ERJ3GEYJ682V	6.8K 1/16W	[M]
R437	D0GB101JA007	100 1/16W	[M]
R439	D0GB473JA041	47K 1/16W	[M]
R440	D0GB472JA041	4.7K 1/16W	[M]
R441	D0GB101JA007	100 1/16W	[M]
R444	D0GB101JA007	100 1/16W	[M]
R445	D0GB101JA007	100 1/16W	[M]
R446	ERJ3GEYJ103V	10K 1/16W	[M]
R447	D0GB223JA041	22K 1/16W	[M]
R448	D0GB471JA041	470 1/16W	[M]
R449	D0GB101JA007	100 1/16W	[M]
R450	ERJ3GEYJ681V	680 1/16W	[M]
R451	D0GB472JA041	4.7K 1/16W	[M]
R452	D0GB106JA007	10M 1/16W	[M]
R453	ERJ3GEY0R00V	0 1/16W	[M]
R454	D0GB223JA041	22K 1/16W	[M]
R455	D0GB101JA007	100 1/16W	[M]
R456	D0GB472JA041	4.7K 1/16W	[M]
R457	D0GB472JA041	4.7K 1/16W	[M]
R458	D0GB472JA041	4.7K 1/16W	[M]
R459	D0GB472JA041	4.7K 1/16W	[M]
R460	D0GB472JA041	4.7K 1/16W	[M]
R461	ERJ3GEYJ103V	10K 1/16W	[M]
R462	ERJ3GEYJ103V	10K 1/16W	[M]
R463	ERJ3GEYJ103V	10K 1/16W	[M]
R464	D0GB101JA007	100 1/16W	[M]
R465	D0GB101JA007	100 1/16W	[M]
R466	D0GB101JA007	100 1/16W	[M]
R467	D0GB101JA007	100 1/16W	[M]
R468	D0GB101JA007	100 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R469	D0GB101JA007	100 1/16W	[M]
R470	D0GB101JA007	100 1/16W	[M]
R471	D0GB101JA007	100 1/16W	[M]
R472	D0GB473JA041	47K 1/16W	[M]
R473	ERJ3GEYJ681V	680 1/16W	[M]
R474	D0GB101JA007	100 1/16W	[M]
R477	ERJ3GEYJ103V	10K 1/16W	[M]
R478	D0GB473JA041	47K 1/16W	[M]
R479	ERJ3GEYJ103V	10K 1/16W	[M]
R480	D0GB472JA041	4.7K 1/16W	[M]
R488	D0GB153JA007	15K 1/16W	[M]
R490	ERJ3GEYJ103V	10K 1/16W	[M]
R501	ERD2FCVJ4R7T	4.7 1/4W	[M]
R502	D0GB472JA041	4.7K 1/16W	[M]
R503	D0GB151JA007	150 1/16W	[M]
R504	D0GB332JA007	3.3K 1/16W	[M]
R505	ERJ3GEYJ103V	10K 1/16W	[M]
R506	ERJ3GEYJ103V	10K 1/16W	[M]
R511	D0AF220JA039	22 1/4W	[M]
R512	ERDS1FVJ1R0T	1 1/2W	[M]
R518	D0AF150JA039	15 1/4W	[M]
R519	D0AF270JA039	27 1/4W	[M]
R520	D0GB561JA007	560 1/16W	[M]
R521	D0GB272JA007	2.7K 1/16W	[M]
R522	D0GB272JA007	2.7K 1/16W	[M]
R523	D0AF332JA039	3.3K 1/4W	[M]
R526	D0GB473JA041	47K 1/16W	[M]
R527	D0GB473JA041	47K 1/16W	[M]
R528	D0GB104JA007	100K 1/16W	[M]
R552	ERJ3GEYJ122V	1.2K 1/16W	[M]
R553	ERJ3GEYJ122V	1.2K 1/16W	[M]
R564	D0GB563JA007	56K 1/16W	[M]
R565	D0GB563JA007	56K 1/16W	[M]
R568	ERJ3GEYJ394V	390K 1/16W	[M]
R569	D0GB334JA007	330K 1/16W	[M]
R572	D0GB562JA007	5.6K 1/16W	[M]
R573	D0GB562JA007	5.6K 1/16W	[M]
R578	D0AF100JA039	10 1/4W	[M]
R579	D0AF100JA039	10 1/4W	[M]
R580	D0AF100JA039	10 1/4W	[M]
R581	D0AF100JA039	10 1/4W	[M]
R584	ERJ3GEY0R00V	0 1/16W	[M]
R585	ERJ3GEY0R00V	0 1/16W	[M]
R601	D0GB182JA007	1.8K 1/16W	[M]
R602	D0GB680JA007	68 1/16W	[M]
R603	D0GB680JA007	68 1/16W	[M]
R604	D0GB104JA007	100K 1/16W	[M]
R605	ERJ3GEYJ682V	6.8K 1/16W	[M]
R606	D0GB472JA041	4.7K 1/16W	[M]
R607	D0GB332JA007	3.3K 1/16W	[M]
R608	D0GB222JA041	2.2K 1/16W	[M]
R609	D0GB152JA007	1.5K 1/16W	[M]
R610	ERJ3GEYJ122V	1.2K 1/16W	[M]
R611	D0GB152JA007	1.5K 1/16W	[M]
R612	ERJ3GEYJ122V	1.2K 1/16W	[M]
R613	D0GB223JA041	22K 1/16W	[M]
R614	D0GB123JA007	12K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R615	ERJ3GEYJ103V	10K 1/16W	[M]
R616	D0GB223JA041	22K 1/16W	[M]
R617	D0GB123JA007	12K 1/16W	[M]
R618	ERJ3GEYJ103V	10K 1/16W	[M]
R619	D0GB223JA041	22K 1/16W	[M]
R620	D0GB123JA007	12K 1/16W	[M]
R621	ERJ3GEYJ103V	10K 1/16W	[M]
R622	D0GB470JA008	47 1/16W	[M]
R623	ERJ3GEYJ102V	1K 1/16W	[M]
R624	ERJ3GEYJ102V	1K 1/16W	[M]
R625	ERJ3GEYJ102V	1K 1/16W	[M]
R626	D0GB182JA007	1.8K 1/16W	[M]
R627	D0GB332JA007	3.3K 1/16W	[M]
R628	D0GB472JA041	4.7K 1/16W	[M]
R629	ERJ3GEYJ682V	6.8K 1/16W	[M]
R630	ERJ3GEYG153V	15K 1/16W	[M]
R631	D0GB222JA041	2.2K 1/16W	[M]
R632	D0GB222JA041	2.2K 1/16W	[M]
R633	D0GB152JA007	1.5K 1/16W	[M]
R634	ERJ3GEYJ122V	1.2K 1/16W	[M]
R635	D0GB151JA007	150 1/16W	[M]
R636	ERJ3GEYJ103V	10K 1/16W	[M]
R701	ERDS1FVJ101T	100 1/2W	[M]
R703	ERDS1FVJ101T	100 1/2W	[M]
R706	D0GB153JA007	15K 1/16W	[M]
R707	D0GB153JA007	15K 1/16W	[M]
R710	D0GB561JA007	560 1/16W	[M]
R711	D0GB561JA007	560 1/16W	[M]
R714	D0GB182JA007	1.8K 1/16W	[M]
R715	D0GB182JA007	1.8K 1/16W	[M]
R718	ERJ3GEYJ102V	1K 1/16W	[M]
R736	D0GB223JA041	22K 1/16W	[M]
R737	D0GB223JA041	22K 1/16W	[M]
R742	D0GB332JA007	3.3K 1/16W	[M]
R743	D0GB333JA007	33K 1/16W	[M]
R744	D0GB223JA041	22K 1/16W	[M]
R745	D0GB183JA007	18K 1/16W	[M]
R746	D0AF221JA039	220 1/4W	[M]
R747	ERDS1FVJ2R2T	2.2 1/2W	[M]
R750	D0GB123JA007	12K 1/16W	[M]
R751	D0GB123JA007	12K 1/16W	[M]
R972	ERDS2TJ821T	820 1/4W	[M]
R973	ERDS2TJ393T	39K 1/4W	[M]
R1061	ERJ3GEY0R00V	0 1/16W	[M]
R1063	ERJ3GEY0R00V	0 1/16W	[M]
R1064	ERJ3GEY0R00V	0 1/16W	[M]
R1101	D0GB330JA007	33 1/16W	[M]
R1102	D0GB152JA007	1.5K 1/16W	[M]
R1103	D0GB183JA007	18K 1/16W	[M]
R1104	ERJ3GEYJ103V	10K 1/16W	[M]
R1105	D0GB222JA041	2.2K 1/16W	[M]
R1106	D0GB104JA007	100K 1/16W	[M]
R1107	ERJ3GEYJ102V	1K 1/16W	[M]
R1109	ERJ3GEYJ102V	1K 1/16W	[M]
R1110	D0GB333JA007	33K 1/16W	[M]
R1201	D0GB330JA007	33 1/16W	[M]
R1202	D0GB152JA007	1.5K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R1203	D0GB183JA007	18K 1/16W	[M]
R1204	ERJ3GEYJ103V	10K 1/16W	[M]
R1205	D0GB222JA041	2.2K 1/16W	[M]
R1206	D0GB104JA007	100K 1/16W	[M]
R1207	ERJ3GEYJ102V	1K 1/16W	[M]
R1209	ERJ3GEYJ102V	1K 1/16W	[M]
R1210	D0GB333JA007	33K 1/16W	[M]
R1302	D0GB471JA041	470 1/16W	[M]
R1303	D0GB475JA007	4.7M 1/16W	[M]
R1304	D0GB223JA041	22K 1/16W	[M]
R1305	ERJ3GEYJ103V	10K 1/16W	[M]
R1309	D0AF471JA039	470 1/4W	[M]
R1313	ERJ3GEYJ103V	10K 1/16W	[M]
R1314	ERJ3GEYJ102V	1K 1/16W	[M]
R1318	ERJ3GEYJ103V	10K 1/16W	[M]
R1327	D0GB472JA041	4.7K 1/16W	[M]
R1328	D0GB153JA007	15K 1/16W	[M]
R1329	D0GB472JA041	4.7K 1/16W	[M]
R1330	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1331	D0GB752JA007	7.5K 1/16W	[M]
R1332	ERJ3GEYJ103V	10K 1/16W	[M]
R1333	ERD2FCVJ4R7T	4.7 1/4W	[M]
R1334	D0GB223JA041	22K 1/16W	[M]
R1335	D0GB152JA007	1.5K 1/16W	[M]
R1337	ERJ3GEYJ103V	10K 1/16W	[M]
R1338	D0GB472JA041	4.7K 1/16W	[M]
R1341	D0GB471JA041	470 1/16W	[M]
R1342	D0GB473JA041	47K 1/16W	[M]
R1343	D0GB332JA007	3.3K 1/16W	[M]
R1344	D0GB273JA007	27K 1/16W	[M]
R1345	ERJ3GEYJ102V	1K 1/16W	[M]
R1371	D0GB223JA041	22K 1/16W	[M]
R1374	D0GB471JA041	470 1/16W	[M]
R1380	ERJ3GEY0R00V	0 1/16W	[M]
R1401	D0GB123JA007	12K 1/16W	[M]
R1402	D0GB274JA007	270K 1/16W	[M]
R1403	ERJ3GEYJ103V	10K 1/16W	[M]
R1404	D0GB223JA041	22K 1/16W	[M]
R1405	ERJ3GEYJ103V	10K 1/16W	[M]
R7028	ERJ3GEY0R00V	0 1/16W	[M]
R7111	ERJ3GEYJ103V	10K 1/16W	[M]
R7211	D0GB823JA007	82K 1/16W	[M]
R7212	D0GB821JA007	820 1/16W	[M]
R7214	D0GB471JA041	470 1/16W	[M]
R7217	ERJ3GEYJ102V	1K 1/16W	[M]
R7218	ERJ3GEYJ102V	1K 1/16W	[M]
R7220	D0GB105JA007	1M 1/16W	[M]
R7221	D0GB101JA007	100 1/16W	[M]
R7253	D0GB100JA007	10 1/16W	[M]
R7254	ERJ3GEYJ102V	1K 1/16W	[M]
R7315	D0GB332JA007	3.3K 1/16W	[M]
R7323	D0GB332JA007	3.3K 1/16W	[M]
R7325	D0GB331JA007	330 1/16W	[M]
R7327	ERJ3GEYJ102V	1K 1/16W	[M]
R7328	ERJ3GEYJ103V	10K 1/16W	[M]
R7329	ERJ3GEYJ102V	1K 1/16W	[M]
R7330	D0GB562JA007	5.6K 1/16W	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
R7331	D0GB223JA041	22K 1/16W	[M]
R7332	ERJ3GEYJ102V	1K 1/16W	[M]
R7335	D0GB101JA007	100 1/16W	[M]
R7336	D0GB100JA007	10 1/16W	[M]
R7339	ERJ3GEYJ102V	1K 1/16W	[M]
R7349	D0GB183JA007	18K 1/16W	[M]
R7601	D0GB4R7JA007	4.7 1/16W	[M]
R7650	D0GB5R6JA007	5.6 1/16W	[M]
W7001	ERJ6GEY0R00V	CHIP JUMPER	[M]
W7002	ERJ6GEY0R00V	CHIP JUMPER	[M]
W7003	ERJ6GEY0R00V	CHIP JUMPER	[M]
W7004	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7005	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7006	ERJ6GEY0R00V	CHIP JUMPER	[M]
W7007	ERJ6GEY0R00V	CHIP JUMPER	[M]
W7008	ERJ6GEY0R00V	CHIP JUMPER	[M]
W7009	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7010	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7011	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7012	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7013	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7014	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7015	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7016	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7017	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7018	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7019	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7020	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7021	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7022	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7023	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7024	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7025	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7026	ERJ3GEY0R00V	CHIP JUMPER	[M]
W7027	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA400	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA401	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA402	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA403	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA404	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA405	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA406	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA407	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA408	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA409	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA410	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA411	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA412	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA413	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA414	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA416	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA417	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA418	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA419	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA420	ERJ3GEY0R00V	CHIP JUMPER	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
WA421	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA424	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA425	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA426	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA427	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA429	ERJ8GEY0R00V	CHIP JUMPER	[M]
WA430	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA431	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA432	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA434	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA435	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA436	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA501	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA502	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA505	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA544	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA545	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA641	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA642	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA644	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA646	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA648	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA649	ERJ3GEY0R00V	CHIP JUMPER	[M]
WA650	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA651	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA652	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA653	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA654	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA656	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA657	ERJ6GEY0R00V	CHIP JUMPER	[M]
WA658	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB501	ERJ8GEY0R00V	CHIP JUMPER	[M]
WB502	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB504	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB505	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB506	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB508	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB510	ERJ8GEY0R00V	CHIP JUMPER	[M]
WB511	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB512	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB513	ERJ8GEY0R00V	CHIP JUMPER	[M]
WB515	ERJ8GEY0R00V	CHIP JUMPER	[M]
WB516	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB517	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB518	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB519	ERJ6GEY0R00V	CHIP JUMPER	[M]
WB536	ERJ6GEY0R00V	CHIP JUMPER	[M]
		CAPACITORS	
C11	F1D1E103A001	0.01 25V	[M]
C12	F2A1C101A234	100P 16V	[M]
C21	F1D1E103A001	0.01 25V	[M]
C22	F2A1C101A234	100P 16V	[M]
C200	ECA1CAK101XB	100 16V	[M]
C201	ECJ1VC1H102J	1000P 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C202	ECJ1VC1H102J	1000P 50V	[M]
C203	F1H1H221A748	220P 50V	[M]
C204	F1H1H221A748	220P 50V	[M]
C205	F1H1H221A748	220P 50V	[M]
C206	F1H1H221A748	220P 50V	[M]
C207	F1H1H102A219	1000P 50V	[M]
C208	F1H1H102A219	1000P 50V	[M]
C209	F1H1H102A219	1000P 50V	[M]
C210	F1H1H102A219	1000P 50V	[M]
C211	ECA1CAK100XB	10 16V	[M]
C212	ECA1CAK100XB	10 16V	[M]
C213	ECA1CAK100XB	10 16V	[M]
C214	ECA1CAK100XB	10 16V	[M]
C215	ECA1CAK100XB	10 16V	[M]
C216	ECA1CAK100XB	10 16V	[M]
C217	ECA1CAK100XB	10 16V	[M]
C218	ECA1CAK100XB	10 16V	[M]
C219	ECA1HAKR22XB	0.22 50V	[M]
C220	ECA1HAKR22XB	0.22 50V	[M]
C221	ECA1CAK100XB	10 16V	[M]
C222	ECA1CAK100XB	10 16V	[M]
C223	ECJ1VB1H472K	4700P 50V	[M]
C224	ECJ1VB1H472K	4700P 50V	[M]
C225	ECJ1VF1H473Z	0.047 50V	[M]
C226	ECJ1VF1H473Z	0.047 50V	[M]
C227	F1H1C104A041	0.1 16V	[M]
C228	F1H1C104A041	0.1 16V	[M]
C229	F1H1H473A748	0.047 50V	[M]
C230	ECA1HAK4R7XB	4.7 50V	[M]
C231	ECJ2FB1A105K	1 10V	[M]
C232	ECA1HAKR47XB	0.47 50V	[M]
C233	F1H1C104A041	0.1 16V	[M]
C234	ECJ1VB1C473K	0.047 16V	[M]
C235	ECJ1VB1C473K	0.047 16V	[M]
C236	F1H1C104A041	0.1 16V	[M]
C237	F1H1H221A748	220P 50V	[M]
C238	F1H1H221A748	220P 50V	[M]
C239	ECA1CAK101XB	100 16V	[M]
C240	ECA1CAK101XB	100 16V	[M]
C241	ECA1CAK100XB	10 16V	[M]
C242	ECA1CAK100XB	10 16V	[M]
C243	ECA1HAKR47XB	0.47 50V	[M]
C244	ECA1HAKR47XB	0.47 50V	[M]
C245	F1H1H101A230	100P 50V	[M]
C246	F1H1H101A230	100P 50V	[M]
C247	ECJ1VC1H270J	27P 50V	[M]
C248	ECJ1VC1H270J	27P 50V	[M]
C249	ECQB1H103JF3	0.01 50V	[M]
C250	F1H1H103A219	0.01 50V	[M]
C251	ECJ1VB1H122K	1200P 50V	[M]
C252	ECJ1VB1H122K	1200P 50V	[M]
C253	ECA1HAKR47XB	0.47 50V	[M]
C254	ECA1HAKR47XB	0.47 50V	[M]
C255	F1H1H103A219	0.01 50V	[M]
C256	ECQB1H103JF3	0.01 50V	[M]
C257	ECA1CAK100XB	10 16V	[M]
C258	ECA1CAK100XB	10 16V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C259	F1H1H102A219	1000P 50V	[M]
C260	F1H1H102A219	1000P 50V	[M]
C263	ECA1HAK3R3XB	3.3 50V	[M]
C264	ECA1HAK3R3XB	3.3 50V	[M]
C265	ECA1CAK100XB	10 16V	[M]
C266	ECA1CAK100XB	10 16V	[M]
C268	ECEA1AKN100B	10 10V	[M]
C269	F1H1H332A013	3300P 50V	[M]
C270	F1H1H332A013	3300P 50V	[M]
C271	F1H1E223A002	0.022 25V	[M]
C272	F1H1E223A002	0.022 25V	[M]
C273	ECA1CAM471XB	470 16V	[M]
C281	F1H1E223A002	0.022 25V	[M]
C282	F1H1E223A002	0.022 25V	[M]
C300	ECA1HAK2R2XB	2.2 50V	[M]
C301	ECA1AAK221XB	220 10V	[M]
C302	ECA1CAK330XB	33 16V	[M]
C303	ECA0JAK101XB	100 6.3V	[M]
C304	F1H1H104A783	0.1 50V	[M]
C320	ECA1CAK100XB	10 16V	[M]
C321	F1H1H471A219	470P 50V	[M]
C322	F2A1C470A234	47P 16V	[M]
C323	ECJ1VB1H561K	560P 50V	[M]
C324	ECJ1VC1H102J	1000P 50V	[M]
C325	F2A1C470A234	47P 16V	[M]
C326	ECJ1VC1H330J	33P 50V	[M]
C327	ECJ1VC1H330J	33P 50V	[M]
C328	F1H1H104A783	0.1 50V	[M]
C330	F1H1E223A002	0.022 25V	[M]
C331	F1H1H221A748	220P 50V	[M]
C350	ECEA1AKA101B	100 10V	[M]
C351	F1H1H104A783	0.1 50V	[M]
C352	ECA0JAK101XB	100 6.3V	[M]
C353	F1H1H102A219	1000P 50V	[M]
C354	F1H1H104A783	0.1 50V	[M]
C355	ECA1HAK2R2XB	2.2 50V	[M]
C380	F1H1H104A783	0.1 50V	[M]
C381	F1H1H104A783	0.1 50V	[M]
C382	F1H1H104A783	0.1 50V	[M]
C401	ECJ1VC1H101K	100P 50V	[M]
C402	F1H1E103A029	0.01 25V	[M]
C403	F1H1H104A783	0.1 50V	[M]
C404	ECA0JAK101XB	100 6.3V	[M]
C405	ECA1AAM102XB	1000 10V	[M]
C407	ECJ1VC1H101K	100P 50V	[M]
C408	ECJ1VC1H101K	100P 50V	[M]
C409	ECA1HAK010XB	1 50V	[M]
C410	ECJ1VC1H101K	100P 50V	[M]
C411	ECA1HAK2R2XB	2.2 50V	[M]
C412	ECJ1VC1H180J	18P 50V	[M]
C413	ECJ1VC1H220J	22P 50V	[M]
C414	ECJ1VC1H101K	100P 50V	[M]
C415	ECA1AAK220XB	22 10V	[M]
C416	F1H1H103A219	0.01 50V	[M]
C417	ECJ1VB1H561K	560P 50V	[M]
C418	ECJ1VB1H561K	560P 50V	[M]
C419	ECJ1VB1H561K	560P 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C420	ECJ1VB1H561K	560P 50V	[M]
C421	ECJ1VB1H561K	560P 50V	[M]
C422	ECJ1VB1H561K	560P 50V	[M]
C423	ECJ1VB1H561K	560P 50V	[M]
C424	ECJ1VB1H561K	560P 50V	[M]
C425	F1H1H471A219	470P 50V	[M]
C426	F1H1H221A748	220P 50V	[M]
C427	F1H1H221A748	220P 50V	[M]
C501	ECQE2104KF3	0.1 250V	[M]
C502	ECA1JM101B	100 63V	[M]
C503	ECA1JM101B	100 63V	[M]
C504	F1H1H103A730	0.01 50V	[M]
C505	ECA2AM100B	10 100V	[M]
C506	F1H1H103A730	0.01 50V	[M]
C507	ECA1CAM102XB	1000 16V	[M]
C509	ECA1CAK220XB	22 16V	[M]
C510	ECQV1H104JL3	0.1 50V	[M]
C511	ECA1EAM101XB	100 25V	[M]
C512	ECA1CAK220XB	22 16V	[M]
C512	ECA1HAM222XE	2200 50V	[M]
C513	ECA1HAM222XE	2200 50V	[M]
C514	ECA1EAM332XE	3300 25V	[M]
C515	ECA1HAK100XB	10 50V	[M]
C516	F1B2H103A060	0.01 500V	[M]
C517	ECA1CAK100XB	10 16V	[M]
C519	ECA1CAK220XB	22 16V	[M]
C520	ECA1CAK220XB	22 16V	[M]
C521	ECA1HAK3R3XB	3.3 50V	[M]
C522	ECA1CAK100XB	10 16V	[M]
C523	ECA1AAK221XB	220 10V	[M]
C524	F1H1H102A219	1000P 50V	[M]
C539	ECEA1HKAR68B	0.68 50V	[M]
C540	ECEA1HKAR68B	0.68 50V	[M]
C543	ECJ1VC1H821J	820P 50V	[M]
C544	ECJ1VC1H821J	820P 50V	[M]
C547	ECJ1VC1H150J	15P 50V	[M]
C548	ECJ1VC1H150J	15P 50V	[M]
C555	F1H1H104A783	0.1 50V	[M]
C556	F1H1H104A783	0.1 50V	[M]
C557	F1H1H104A783	0.1 50V	[M]
C558	F1H1H104A783	0.1 50V	[M]
C559	F1H1H682A219	6800P 50V	[M]
C560	F1H1H682A219	6800P 50V	[M]
C561	F1H1H471A219	470P 50V	[M]
C562	F1H1H471A219	470P 50V	[M]
C572	ECQV1H104JL3	0.1 50V	[M]
C601	F1H1H471A219	470P 50V	[M]
C602	F1H1H102A219	1000P 50V	[M]
C603	F1H1H103A219	0.01 50V	[M]
C604	F1H1H471A219	470P 50V	[M]
C605	F1H1H102A219	1000P 50V	[M]
C606	ECA1HAK220XB	22 50V	[M]
C607	F1H1H101A230	100P 50V	[M]
C608	ECA1HAK220XB	22 50V	[M]
C609	F1H1H101A230	100P 50V	[M]
C610	ECA1HAK220XB	22 50V	[M]
C611	F1H1H101A230	100P 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C612	F1H1H101A230	100P 50V	[M]
C613	F1H1H101A230	100P 50V	[M]
C614	F1H1H104A783	0.1 50V	[M]
C615	F1H1H101A230	100P 50V	[M]
C616	F1H1H103A219	0.01 50V	[M]
C617	ECA0JAK470XB	47 6.3V	[M]
C618	F1H1H102A219	1000P 50V	[M]
C619	ECA1AAK220XB	22 10V	[M]
C620	F1H1H103A219	0.01 50V	[M]
C621	F1H1H221A748	220P 50V	[M]
C622	F1H1H221A748	220P 50V	[M]
C623	F1H1H221A748	220P 50V	[M]
C624	ECA1HAK220XB	22 50V	[M]
C625	F1H1H104A783	0.1 50V	[M]
C626	ECJ1VC1H102J	1000P 50V	[M]
C627	ECJ1VC1H102J	1000P 50V	[M]
C628	ECJ1VC1H102J	1000P 50V	[M]
C629	ECJ1VC1H102J	1000P 50V	[M]
C630	ECJ1VC1H102J	1000P 50V	[M]
C631	ECJ1VC1H102J	1000P 50V	[M]
C632	ECJ1VC1H102J	1000P 50V	[M]
C633	ECJ1VC1H102J	1000P 50V	[M]
C634	ECJ1VC1H102J	1000P 50V	[M]
C635	ECJ1VC1H102J	1000P 50V	[M]
C636	ECJ1VC1H102J	1000P 50V	[M]
C700	F1H1E104A029	0.1 25V	[M]
C702	ECJ1VC1H121J	120P 50V	[M]
C703	ECJ1VC1H121J	120P 50V	[M]
C705	ECA1HAM101XB	100 50V	[M]
C707	ECA1HAM101XB	100 50V	[M]
C709	ECA1HAK100XB	10 50V	[M]
C710	ECA1HAK100XB	10 50V	[M]
C726	ECA1CAK330XB	33 16V	[M]
C728	F1B1H103A007	0.01 50V	[M]
C729	ECA1HM330B	33 50V	[M]
C1101	ECA1HAK010XB	1 50V	[M]
C1102	F1H1H471A219	470P 50V	[M]
C1103	ECA1CAK101XB	100 16V	[M]
C1104	F1H1E273A002	0.027 25V	[M]
C1105	F1H1H471A219	470P 50V	[M]
C1106	ECA1HAK2R2XB	2.2 50V	[M]
C1107	F1H1H152A219	1500P 50V	[M]
C1108	ECA1CAK100XB	10 16V	[M]
C1109	ECA1HAK3R3XB	3.3 50V	[M]
C1110	ECJ1VB1H682K	6800P 50V	[M]
C1121	F1H1H102A219	1000P 50V	[M]
C1122	F1H1E103A029	0.01 25V	[M]
C1123	ECJ1VB1H271K	270P 50V	[M]
C1201	ECA1HAK010XB	1 50V	[M]
C1202	F1H1H471A219	470P 50V	[M]
C1203	ECA1CAK101XB	100 16V	[M]
C1204	F1H1E273A002	0.027 25V	[M]
C1205	F1H1H471A219	470P 50V	[M]
C1206	ECA1HAK2R2XB	2.2 50V	[M]
C1207	F1H1H152A219	1500P 50V	[M]
C1208	ECA1CAK100XB	10 16V	[M]
C1209	ECA1HAK3R3XB	3.3 50V	[M]

[illegible]	[illegible]	[illegible]	[illegible]

Ref. No.	Part No.	Part Name & Description	Remarks
C1210	ECJ1VB1H682K	6800P 50V	[M]
C1221	F1H1H102A219	1000P 50V	[M]
C1222	F1H1E103A029	0.01 25V	[M]
C1223	ECJ1VB1H271K	270P 50V	[M]
C1301	ECA1HAK0R1XB	0.1 50V	[M]
C1302	F1H1C333A071	0.033 16V	[M]
C1303	F1H1C333A071	0.033 16V	[M]
C1304	F2A1H4R7A014	4.7P 50V	[M]
C1305	ECA1CAK330XB	33 16V	[M]
C1307	ECA1AAK221XQ	220 10V	[M]
C1308	ECA1CAK220XB	22 16V	[M]
C1310	ECA1HAK0R1XB	0.1 50V	[M]
C1311	ECA1CAK470XB	47 16V	[M]
C1312	F1H1H332A013	3300P 50V	[M]
C1314	F1H1H222A013	2200P 50V	[M]
C1315	F1H1H222A013	2200P 50V	[M]
C1316	F1H1H102A219	1000P 50V	[M]
C1317	F1H1H102A219	1000P 50V	[M]
C1318	ECQV1H473JL3	0.047 50V	[M]
C1319	ECA1CAK101XB	100 16V	[M]
C1320	ECA1HAK010XB	1 50V	[M]
C1321	F0A2A472A019	4700P 100V	[M]
C1323	ECEA1HKN010B	1 50V	[M]
C1324	ECA1CAK470XB	47 16V	[M]
C1326	ECA1CAK100XB	10 16V	[M]
C1371	F1H1E103A029	0.01 25V	[M]
C7102	ECJ1VB1A474K	0.47 10V	[M]
C7107	ECJ1VB1H223K	0.022 50V	[M]
C7142	F1H1H332A013	3300P 50V	[M]
C7154	F1H1C104A041	0.1 16V	[M]
C7155	F1H1C104A041	0.1 16V	[M]
C7161	F1H1C104A041	0.1 16V	[M]
C7164	ECJ2FF1A106Z	10 10V	[M]
C7165	ECJ2FF1A106Z	10 10V	[M]
C7166	F1H1H103A219	0.01 50V	[M]
C7203	F2A0J221A200	220P 6.3V	[M]
C7204	F1H1C104A041	0.1 16V	[M]
C7216	ECJ1VB1H681K	680P 50V	[M]
C7217	F1H1C104A041	0.1 16V	[M]
C7218	ECJ1VB1C823K	0.082 16V	[M]
C7223	ECEA1HKA4R7I	4.7 50V	[M]
C7225	F1H1H102A219	1000P 50V	[M]
C7226	F1H1H102A219	1000P 50V	[M]
C7227	ECA1HAK010XI	1 50V	[M]
C7228	ECA1HAK010XI	1 50V	[M]
C7230	F1H1C104A041	0.1 16V	[M]
C7231	F2A0J221A200	220P 6.3V	[M]
C7232	F2A0J221A200	220P 6.3V	[M]
C7233	F1H1C104A008	0.1 16V	[M]
C7234	F1H1C104A041	0.1 16V	[M]
C7235	ECEA1CKA100I	10 16V	[M]
C7241	F1H1H102A219	1000P 50V	[M]
C7243	F1H1C104A008	0.1 16V	[M]
C7244	ECJ1VB1C153K	0.015 16V	[M]
C7253	F1H1H471A219	470P 50V	[M]
C7263	F1H1C104A041	0.1 16V	[M]
C7264	F1H1C104A041	0.1 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C7315	ECJ1VB1A474K	0.47 10V	[M]
C7334	ECEA1AKA221I	220 10V	[M]
C7335	F1H1C104A008	0.1 16V	[M]
C7338	ECJ1VB1C563K	0.056 16V	[M]
C7339	ECJ1VB1C183K	0.018 16V	[M]
C7352	ECJ1VB1C183K	0.018 16V	[M]
C7601	ECEA0JKA330I	33 6.3V	[M]
C7613	F1H1C104A041	0.1 16V	[M]
C7614	F2A0J101A198	100P 6.3V	[M]
C7626	F1H1C104A041	0.1 16V	[M]
C7670	F1H1C104A041	0.1 16V	[M]

FLE0602D/A/P/M/S

A CD SERVO P.C.B

PbF

CN7002

17 . . . 16

2 . . . 1

CN7001

2 . . . 1

16 . . . 15

M7301
TRV MOTOR

M

M7302
SPL MOTOR

M

SOLDER SIDE

OPTICAL PICKUP

PHONE

JK201

1 2
CN300

FAN UNIT

PbF

20 2
21 1
CN340

B MAIN P.C.B

CN401

1 . . . 20

2 . . . 21

CN350

14 2
13 1

2 16
1 17
CN351

CN402

1 11

CN200

1 6

SOLDER SIDE

PbF

T502
(SUB -TRANSFORMER)

H TRANSFORMER P.C.B

CN501

1 . . . 9

T501
(POWER TRANSFORMER)

H501/JW501

1 . . . 10

JK503

AC IN ~
230V 50Hz...E/EG
230-240V 50Hz...EB

SOLDER SIDE

1 11
CP501

1 6
CP502

G POWER P.C.B

SPEAKER

JK501

SOLDER SIDE

CN501

10 1

PbF

F TAPE EJECT P.C.B

WR1308B

2 1

21 1
20. 2
CN1305

SOLDER SIDE

WR1308A

1
2

PbF

REC/PLAY
HEAD

D DECK P.C.B

CP1301

2 1
2 3
4 5

TO R/P Head

WR1903

2 1

CP1902

1 . . . 9

SOLDER SIDE

PbF

MOTOR

PbF

SOLDER SIDE

1 9
CS971

PL+

PL-

SOLENOID

E DECK MECHANISM P.C.B

PbF

14 2
13 1
CN1

I CD LOADING P.C.B

SOLDER SIDE

FL601

PbF

H601/JW601

1 . . . 10

Z601

SENSOR

CN601

21 . . . 20

1 . . . 2

C PANEL P.C.B

VR601

VR603

VR602

JK601

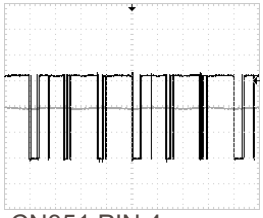
MUSIC PORT

SOLDER SIDE

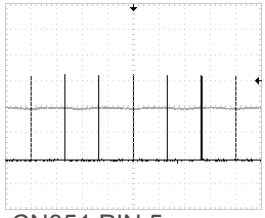
VOLUME

TREBLE

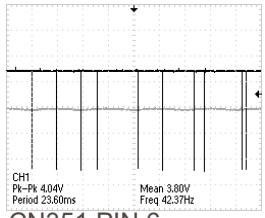
BASS



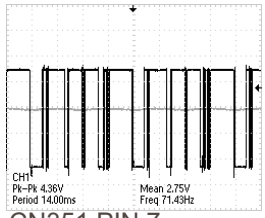
CN351 PIN 4
CD PLAY
3.48Vp-p (10msec.div)



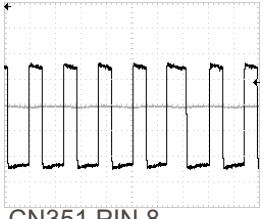
CN351 PIN 5
CD PLAY
3.44Vp-p (10msec.div)



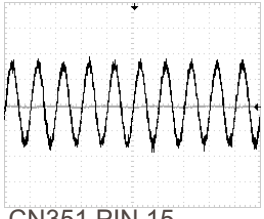
CN351 PIN 6
CD PLAY
4.04Vp-p (25msec.div)



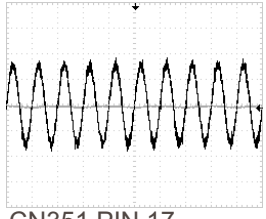
CN351 PIN 7
CD PLAY
4.36Vp-p (10msec.div)



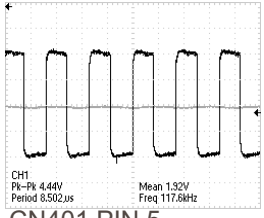
CN351 PIN 8
CD PLAY
4.16Vp-p (5usec.div)



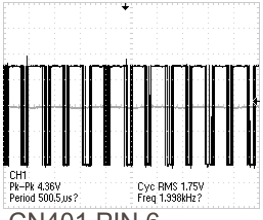
CN351 PIN 15
CD PLAY
372mVp-p (1msec.div)



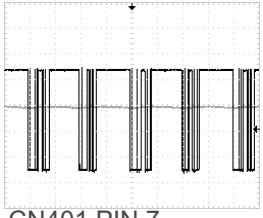
CN351 PIN 17
CD PLAY
364mVp-p (1msec.div)



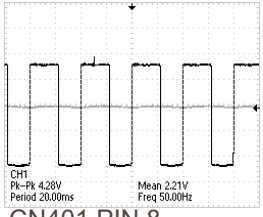
CN401 PIN 5
CD PLAY
4.44Vp-p (5usec.div)



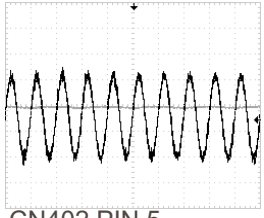
CN401 PIN 6
CD PLAY
4.36Vp-p (25msec.div)



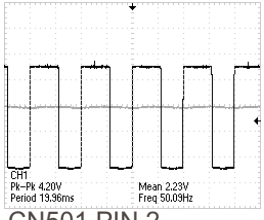
CN401 PIN 7
CD PLAY
3.2Vp-p (10msec.div)



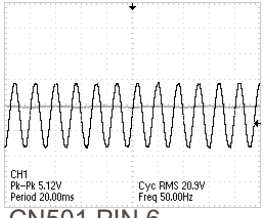
CN401 PIN 8
CD PLAY
4.28Vp-p (10msec.div)



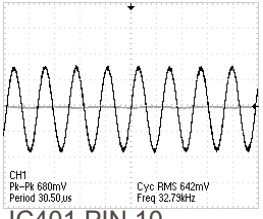
CN402 PIN 5
CD PLAY
190mVp-p (1msec.div)



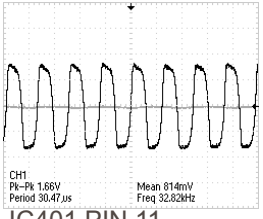
CN501 PIN 2
CD PLAY
4.2Vp-p (10msec.div)



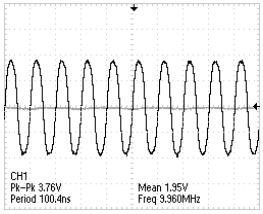
CN501 PIN 6
CD PLAY
5.12Vp-p (25msec.div)



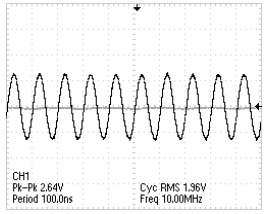
IC401 PIN 10
CD PLAY
680mVp-p (25usec.div)



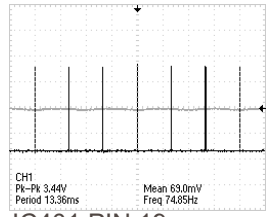
IC401 PIN 11
CD PLAY
1.66Vp-p (25usec.div)



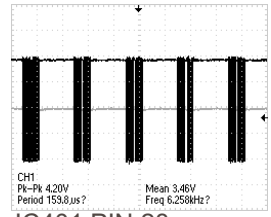
IC401 PIN 13
CD PLAY
3.76Vp-p (100nsec.div)



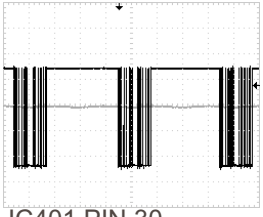
IC401 PIN 15
CD PLAY
2.64Vp-p (100nsec.div)



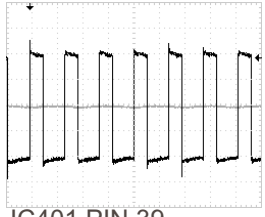
IC401 PIN 19
CD PLAY
3.44Vp-p (10msec.div)



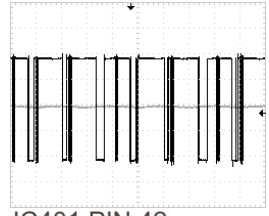
IC401 PIN 28
CD PLAY
4.2Vp-p (10msec.div)



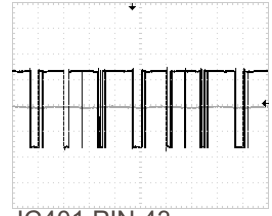
IC401 PIN 30
CD PLAY
4.04Vp-p (5usec.div)



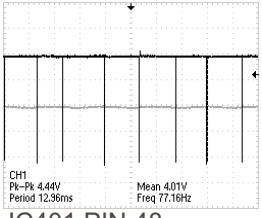
IC401 PIN 39
CD PLAY
5.4Vp-p (5usec.div)



IC401 PIN 42
CD PLAY
4.4Vp-p (10msec.div)

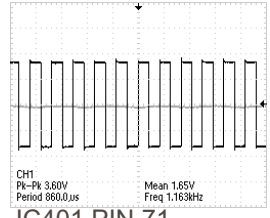


IC401 PIN 43
CD PLAY
4.44Vp-p (10msec.div)

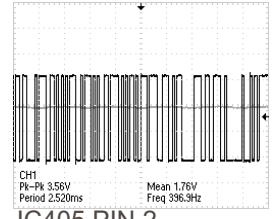


IC401 PIN 48
CD PLAY
3.24Vp-p (10msec.div)

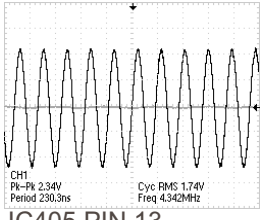
IC401 PIN 70
CD PLAY
3.44Vp-p (10msec.div)



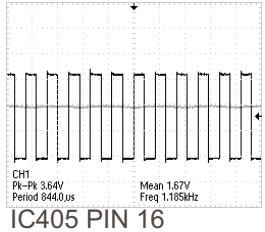
IC401 PIN 71
CD PLAY
3.6Vp-p (1msec.div)



IC405 PIN 2
CD PLAY
3.56Vp-p (10msec.div)



IC405 PIN 13
CD PLAY
2.34Vp-p (250nsec.div)



IC405 PIN 16
CD PLAY
3.64Vp-p (1msec.div)

PANEL P.C.B.

Ref No.	IC 601																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	1.8	3.3	0	3.5	2.7	3.2	1.4	0	3.3	-24.5	-24.5	-24.5	-20	-24.5	-15.4	-24.5
STANDBY	0	0	0	0	1.9	3.3	0	0	1.3	1.6	1.6	0	3.3	-24.8	-26.8	-26.8	-22.3	-22.3	-22.3	-26.7

Ref No.	IC 601																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	-24.5	-24.5	-22.2	-22.2	-24.5	-24.5	-26.7	-20	-13.3	-27.2	-18	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5	-24.5
STANDBY	-26.7	-24.5	-22.3	-22.3	-26.8	-26.8	-26.8	-24.5	-24.5	-27.3	-18	-24.5	-.24.5	-23.5	-.24.6	-22.5	-.24.7	-21.5	-.24.8	-20.5

Ref No.	IC 601																			
MODE	41	42	43	44																
CD PLAY	-24.5	-24.5	3.3	0																
STANDBY	-24.5	-24.5	3.3	0																

POWER P.C.B.

Ref No.	IC 502																			
MODE	1	2	3	4	5															
CD PLAY	7.5	15.3	0	9.5	15.3															
STANDBY	7.5	15.8	0	9.5	15.8															

Ref No.	Q505				Q506				Q508				Q509				Q515			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	-0.7	-9	0		-8.5	-40.7	-9		0	3.9	0.1		0.1	3.9	0		0	6.4	0	
STANDBY	-0.7	-9	0		-8.5	-41	-9		0.1	3.9	0		0.1	3.8	0		0	0	3.8	

Ref No.	Q519				QR522				Q524											
MODE	E	C	B		E	C	B		E	C	B									
CD PLAY	5.6	40	6.2		0	3.9	0		12	15.2	12.5									
STANDBY	0	42	0		0	3.8	0		12	15.7	12.6									

DECK MECHANISM P.C.B.

Ref No.	IC971																		
MODE	1	2	3	4															
CD PLAY	3.8	3.9	3.7	3.9															
STANDBY	3.7	3.7	2.7	3.8															

DECK P.C.B.

Ref No.	IC1000																			
MODE	1	2	3	4	5															
CD PLAY	5.6	0	0	0	0															
STANDBY	5.5	0	0	0	0															

Ref No.	IC1001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0.7	4.9	4.1	0	3.9	0	0	0	5.7	0	8.4	0	0	0	0	3.4	0.2	4	4.8
STANDBY	0	0.7	4.8	4.1	0	3.8	0	0	0	5.7	0	8.4	0	0	0	0	3.4	0.2	4	4.8

Ref No.	IC1001																			
MODE	21	22																		
CD PLAY	0.7	0																		
STANDBY	0.7	0																		

Ref No.	Q1101				Q1201				Q1302				Q1303				Q1304			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.6		0	0	0.7		1.4	1.1	0		0	5.6	0		5.6	0	5.6	
STANDBY	0	0	0		0	0	0		0	0	0		0	5.5	0		5.5	0	5.5	

Ref No.	Q1309				Q1310				Q1312				Q1314				Q1315			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	8.3	0		0	8.3	0		0	0	0		9.5	-1.1	9.5		9.5	0	9.5	
STANDBY	0	8.3	0		0	8.3	0		0	0	0		9.5	-1.1	-9.5		9.5	0	9.5	

Ref No.	Q1316				Q1317															
MODE	E	C	B		E	C	B													
CD PLAY	0	8.9	-1.3		0	0	0													
STANDBY	0	8.9	-1		0	0	0													

TRANSFORMER P.C.B.

Ref No.	IC503																			
MODE	1	2	3	4	5															
CD PLAY	3.9	6.3	0	5.5	5.5															
STANDBY	3.7	6.3	0	5.5	5.5															

Ref No.	Q600				Q601				Q602				Q603							
MODE	E	C	B		E	C	B		E	C	B		E	C	B					
CD PLAY	0	0.2	0.8		5.9	7.4	6.6		0	3	1.5		-21.9	-27.9	-22.5					
STANDBY	0	6	0		6	6.9	6.7		0	3	1.5		-16.9	-17.2	-17.1					

MAIN P.C.B.

Ref No.	IC201																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	3.9	0	0	1.1	0	0	0												
STANDBY	0	3.8	0	0	1.2	0	0	0												

Ref No.	IC401																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.9	3.9	3.9	3.9	0	0	0	0	0	0	1.2	3.9	2	0	2	4	4	0	0	2.3
STANDBY	3.9	0.9	3.8	0.1	0	0	0	0	0	1	1.3	3.8	1.9	0	1.7	3.6	3.6	3.6	0	2.1

Ref No.	IC401																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	4.1	4.1
STANDBY	3.8	0	0	0	0	2.8	0	3.5	0	3.5	0	0	0	0	0	0	0	0	0	0.1

Ref No.	IC401																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	4.1	4.1	0	0	0	4.1	3.3	5.4	0	0	4.7	0.2	4	4	4	4	4.8	0	0
STANDBY	0	0	0	0	0.1	0	3.9	0.1	5.4	3.8	0	3.8	0.1	0	0	0	0	0	0	0

Ref No.	IC401																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0.3	4.1	0.9	0	4	0	0	0	0	1.5	1.6	0	0	0	0	0	0	0	4	4
STANDBY	0.3	3.9	0	0	0	0	0	0	0	0.3	0.3	0	0	0	0	0	0	0	3.8	0

Ref No.	IC401																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	0	0	0	0	4	4	4	4	2.4	4.1	4.1	4.1	1.8	0	1.3	4	4	0
STANDBY	0	0	0	0	0	0	3.8	3.8	0	3.8	2.3	3.8	3.8	3.8	3.8	0	1.6	3.6	0	0

Ref No.	IC402																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	3.9	0	0	1	0	0	0												
STANDBY	0	3.8	0	0	1.2	0	0	0												

Ref No.	IC403																			
MODE	1	2	3	4	5															
CD PLAY	4.6	0	4.6	0	3.3															
STANDBY	4.7	0	4.7	0	3.3															

Ref No.	IC405																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0.4	1.7	1.6	1.6	3.3	0	1.7	1.6	0	0	0	3.3	1.7	1.7	0	1.6				
STANDBY	0	1.6	1.6	1.6	3.3	0	1.6	1.6	0	0	0	3.3	1.7	1.7	0	1.6				

Ref No.	QR201				Q205				Q206				Q207				Q208			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	3.9	0		0	0	-5.7		0	0	-5.7		0	0	-5.7		0	0	-5.7	
STANDBY	0	3.8	0		0	0	0.6		0	0	0.6		0	0	0.6		0	0	0.6	

Ref No.	Q209				Q210				Q211				Q212				Q303			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0		0	0	0		0	0	-5.7		0	0	-5.7		12	0	12	
STANDBY	0	0	0		0	0	0		0	0	0.6		0	0	0.6		12.1	0	12.1	

Ref No.	Q305				QR306				QR402				QR405				QR480			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	9.5	0		0	9.5	0		0	3.6	0		3.9	0	3.5		0	0	5.4	
STANDBY	0	9.5	0		0	9.5	0		0	3.8	0		3.9	3.8	0.5		0	0	5.4	

Ref No.	Q480																			
MODE	E	C	B																	
CD PLAY	3.9	3.9	3.2																	
STANDBY	3.9	3.8	3.1																	

CD SERVO P.C.B.

Ref No.	IC7001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	3.3
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.6	3.3

Ref No.	IC7001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0	1.6	1.7	1.9	0	3.3	3.3	3.2	0	0	1.6	1.6	1.6	0	0	0	1.7	1.8	1.8
STANDBY	1.6	0	1.6	1.6	1.6	0	3.3	0	0	0	0	1.6	0	1.6	1.6	1.6	1.6	1.6	0	0

Ref No.	IC7001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0.2	2.4	1.8	1.7	0	1.8	3.3	1.2	1.2	0	1.7	1.7	0.8	1.4	1.4	1.5	0	3	1.5	0
STANDBY	0	0	1.4	1.7	1.6	1.7	3.3	1.1	0	0	0	0	0	0	0	1.5	0	3	0	0

Ref No.	IC7001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	3.3	0	0	0	0	0	0	2.8	3.8	2.7	0	2.6	0	1.6	0	1.5	3.3	0	3.3	1.7
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3	0	3.3	1.6	1.6

Ref No.	IC7001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	-	3.3	0	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	0
STANDBY	3.3	0	0	0	0	0	0	0	0	0	0	0	3.3	0	0	0	0	0	0	0

Ref No.	IC7002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.6	0	1.6	0	0	0	0	0	0	7.4	4.2	3.4	3.5	3.4	2.9	4.1	3.7	3.4	7.4	0
STANDBY	1.6	0	1.6	0	0	0	0	0	0	7.5	0	0	3.5	0	3.5	3.5	3.5	3.5	7.5	0

Ref No.	IC7002																			
MODE	21	22	23	24	25	26	27	28												
CD PLAY	7.4	0	0	0	7.4	1.6	1.6	1.6												
STANDBY	7.5	0	0	0	7.5	1.6	1.6	1.6												

Ref No.	Q7601																			
MODE	E	C	B																	
CD PLAY	3.1	2	2.4																	
STANDBY	3.3	0.2	3.3																	

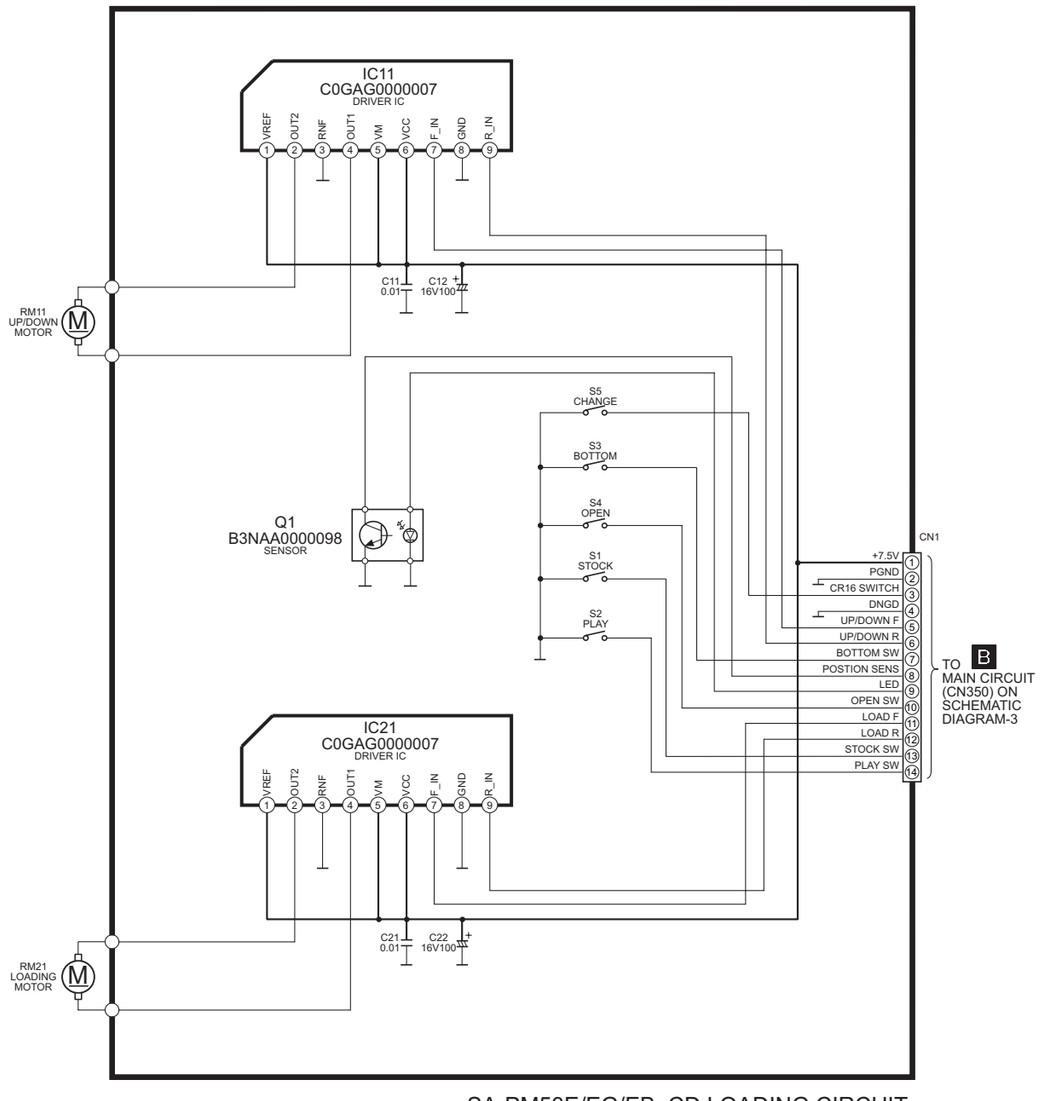
CD LOADING P.C.B.

Ref No.	IC11																		
MODE	1	2	3	4	5	6	7	8	9										
CD PLAY	7.5	0	0	0	0	0	0	0	0										
STANDBY	7.5	1.1	0	1.3	7.5	7.5	0	0	0										
Ref No.	IC21																		
MODE	1	2	3	4	5	6	7	8	9										
CD PLAY	7.4	0	0	0	7.4	7.4	3.9	0	4										
STANDBY	7.5	1.2	0	1.2	7.5	7.5	0	0	0										

SCHEMATIC DIAGRAM-8

I CD LOADING CIRCUIT

——— : +B SIGNAL LINE



SA-PM53E/EG/EB CD LOADING CIRCUIT

SCHEMATIC DIAGRAM-7

H TRANSFORMER CIRCUIT

—— : -B SIGNAL LINE —— : +B SIGNAL LINE

TO G
POWER CIRCUIT(CN501)
ON SCHEMATIC DIAGRAM-6

H501/JW501
VCC-, VCC+, AGND, AGND, VCC-, VCC-, DGND, SUB+B, AC_DET 9.6V

TO C
PANEL CIRCUIT
(H601/JW601)
ON SCHEMATIC
DIAGRAM-4

CN501
DGND, HALT, PCONT, STYBY3.3V, -VP, FL2, FL1, VPGND, 5.6V

D520 B0EAKM000117
R511 22
R512 1
T501 G4CYAYY00077
FP502 1A
FP501 4A
AGND

C511 25V100
D518 B0EAKM000117
D516 B0EAKM000117
D519 B0EAKM000117
D517 B0EAKM000117
C510 0.1

IC503
C0DAZYY00005
3.3V REGULATOR
VCC V02 V01 GND CTL
C509 16V22
C512 50V2200

C507 16V1000
D512 D510 D513 D511
D510, D511, D512, D513 B0EAKM000117
C506 0.01

D502 B0EAMM000038
D503 B0EAMM000038
C501 0.1
D504 B0EAMM000038
D505 B0EAMM000038

QR503
B1GBCFJJ0007
SWITCH
D509 B0ACCK000005
R506 10K
R505 10K
-VPGND

R504 3300
Q502
B1ABGC000005
PCONT SWITCH

Q501
2SB0621AHA
-VP VOLTAGE
REGULATOR
C504 0.01
R501 4R7
R502 4700
R503 150
C505 100V10
D508 B0BC028A007
C503 63V100
D507 B0EAKM000117
D506 B0EAKM000117
C502 63V100
-VPGND

RL501
K6B1ADA00011
D501 B0ACCK000005

T502
G4CYAYY00065

F1 250V 1A
FC2 FC1
Z501 ERZVA5Z471
L501
G0B371HA0005
AC IN
E/EG...230V 50Hz
EB...230~240V 50Hz
JK503

SA-PM53E/EG/EB TRANSFORMER CIRCUIT

SCHEMATIC DIAGRAM-6

G POWER CIRCUIT

—— : -B SIGNAL LINE —— : +B SIGNAL LINE ⇨ : MAIN SIGNAL LINE

TO B MAIN CIRCUIT (CN200) ON SCHEMATIC DIAGRAM-2

CP502: -9V, AFGND, +9V, R_IN, AFGND, L_IN

TO B MIAN CIRCUIT (CN402) ON SCHEMATIC DIAGRAM-2

CP501: +11V, +9.6V, CD_GND, +7.5V, PGND, OP_LEVEL, PCONT2, DC_DET

WB505, WB504, WB501, WB513 0, WB518 0

D529 B0ACCK000005 (+9.6V)

D528 B0ACCK000005 (+7.5V)

WA544 0, WA545 0, WB517 0

IC501 C5ZAZ0000083 POWER HIC

IC501: IN/2 R, NF/2 R, STDBY, NF/1 L, IN/1 L, MONITOR, GND, +PRE, CH2- R, CH2+ R, CH1- L, CH1+ L, +VCC, -VCC, -PRE

QR522 B1GBCFJJ0044 DC DETECT SWITCH

WB512

R736 27K, R750 12K, C540 50V0.68, R552 1.2K

R737 27K, WB516 0, C539 50V0.68, R553 1.2K

R751 12K

Q519 B1ABCF000176 STANDBY SWITCH

D537 B0ACCK000005, R743 33K, C726 16V33, R744 22K

WB508, Q515 B1GBCFJJ0044 PCONT SWITCH, R742 5.6K

R745 18K

WB519 (PCONT2)

WA505 0, C702 120P, R710 560, R718 1K

C703 120P, R711 560, C700 0.1

R706 15K, C544 820P, R707 15K

R714 1.8K, C710 50V10, R715 1.8K, C709 50V10, C543 820P

C707 50V100

R564 56K, C548 15P, R565 56K, C547 15P

R703 100, R701 100

C705 50V100

R669 330K, R658 390K, R572 5.6K, R573 5.6K

R529 100K, C523 10V220, C524 100P

Q508, Q509 B1ABCF000079 DCDET SWITCH

Q508, Q509, WA501, WA502, WB511

R527 47K, R526 47K

R579 10, L503, R578 10, L504

L503,L504 G0AR76Y00003

R581 10, C557 0.1, C555 0.1

R580 10, C558 0.1, C556 0.1

C559 6800P, C559 6800P

JK501: VLO_GND, LO_L, LO_GND, LO_R

TO SPEAKER UNIT

C561 1000P, C562 1000P

E502 TO INNER CHASSIS GROUND

R584 0, R585 0, AGND

P_MTR_R, P_MTR_L

E501 TO CHASSIS GROUND

C572 0.1

IC502 C0DAZYY00006 DUAL REGULATOR IC

IC502: VCC, V02, V01, GND

C521 3.3V, C519 16V22, C520 16V22, WB510

D523 B0ACCK000005

C522 16V10

Q524 B1BABD000001 VOLTAGE REGULATOR

C728 0.01, R746 220, R747 2.2

C729 50V33, D538 B0BC01200019

Q506 B1BCCG000002 CURRENT LIMITER

C517 16V50

R521 2.7K, R520 560, WB515, Q505, C515 50V10

R522 2.7K

C516 0.01, R523 3300, R518 15, R519 27

Q505 B1ACCF000094 CURRENT LIMITER

C514 25V3300

C512 50V2200, C513 50V2200, WB506 0

WB502 0, WB536 0

CN501: VCC+, VCC+, AGND, AGND, VCC-, VCC-, DGND, SUB+B, ACDET, +9.6V

TO H TRANSFORMER CIRCUIT (H501/JW501) ON SCHEMATIC DIAGRAM-7

SA-PM53E/EG/EB POWER CIRCUIT

SCHEMATIC DIAGRAM-5

D DECK CIRCUIT

——— : +B SIGNAL LINE

▨ : TAPE PLAYBACK SIGNAL LINE

▨ : TAPE RECORD SIGNAL LINE

ERASE HEAD
R/P HEAD
LCH
RCH
CP1301
PBLIN
PBRIN
IC1001
AN7326K
DECK R/P IC
IC1000
C1AA00000612
ANALOG SWITCH
Q1101,Q1201
B1ABGC000005
MUTTING SWITCH
Q1101
Q1201
Q1302
B1GDCFJJ0002
DECK MUTTING CONTROL
Q1304
B1GDCFGH0002
REC.H
Q1303
B1GBCFGH0001
SWITCH
Q1309, Q1310
B1AAGC000006
BIAS SWITCH
Q1312
B1ABCF000011
SWITCH
Q1317
B1ABGC000005
BEATPROOF LEVEL SWITCH
L1301
G2ZZZ00000024
L1302
G0C470JA0052
D1301
B0ACCK000005
D971
MA3C16500E
IC971
CNB13030R2AU
PHOTO INTERUPTOR
CP1902
CS971
S971 (MODE)
S972 (HALF)
S975 (REC_INH_F)
S973 (CR02)
WR1903
Q1316
2SD09650RA
SWITCH
Q1314
B1GDCFGH0002
SWITCH
Q1315
B1ACKD000006
SWITCH
WR1308B
WR1308A
S1901
TAPE EJECT
CN1305
TO B MAIN CIRCUIT (CN340) ON SCHEMATIC DIAGRAM-2

SA-PM53E/EG/EB DECK / DECK MECHANISM / TAPE EJECT CIRCUIT

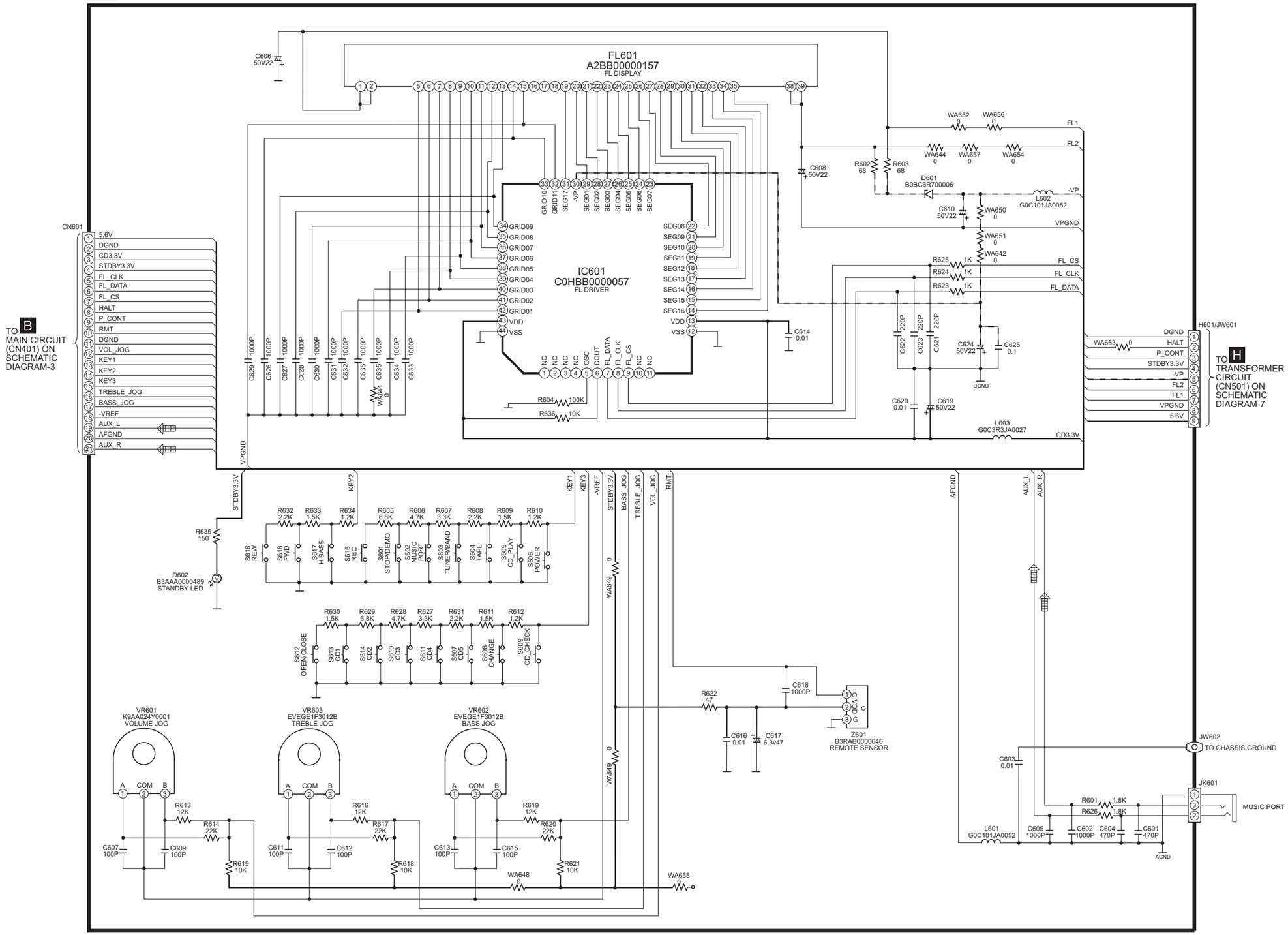
F TAPE EJECT CIRCUIT

E DECK MECHANISM CIRCUIT

SCHEMATIC DIAGRAM-4

C PANEL CIRCUIT

: +B SIGNAL LINE : +B SIGNAL LINE : AUX SIGNAL LINE



SA-PM53E/EG/EB PANEL CIRCUIT

SCHEMATIC DIAGRAM - 2

B MAIN CIRCUIT

: -B SIGNAL LINE
: +B SIGNAL LINE
: MAIN SIGNAL LINE
: CD SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: FM/AM SIGNAL LINE
: AUX SIGNAL LINE

TO FAN CN300

TO TUNER PACK (ENG07811QF) Z301

TO D DECK CIRCUIT (CN1305) ON SCHEMATIC DIAGRAM-5

TO A CD SERVO CIRCUIT (CN7002) ON SCHEMATIC DIAGRAM-1

TO G POWER CIRCUIT (CP502) ON SCHEMATIC DIAGRAM-6

TO G POWER CIRCUIT (CP501) ON SCHEMATIC DIAGRAM-6

Q301,Q302 B1ABCF000079 DCDET SWITCH
Q303 B1ACKD000006 LEVEL SWITCH
Q304 B1ABCF000079 LEVEL SWITCH

QR305,QR306 B1GBCFGG0030 MOTOR SWITCH

Q480 B1ADCE000012 PCONT SWITCH
QR480 B1GBCFJJ0051 PCONT SWITCH

IC201 C1BB00001121 ASP IC

Q209 B1ABCF000079 AGC CONTROL
Q210 B1ABCF000079 AGC CONTROL

IC202 C0AABB000125 OP AMP IC

Q205,Q206 B1ABGC000005 MUTING SWITCH

QR201 B1GDCFJJ0047 MUTE CONTROL

Q207,Q208,Q211,Q212 B1ABGC000005 AMPLIFIER

L291,L292,L295 J0JBC0000019

PHONES

SCHEMATIC DIAGRAM - 3

B MAIN CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: AUX SIGNAL LINE

IC405
C1BB00000943
RDS IC

IC403
C0DBZGC00067
REGULATOR

IC401
C2CBYY000164
MICRO-PROCESSOR

IC402
EEPROM
(NOT SUPPLIED)

QR405
B1GDCFGG0026
MUTE SWITCH

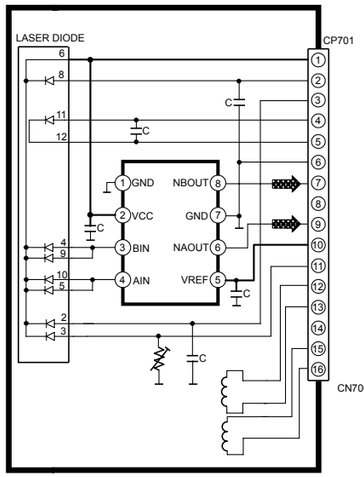
QR402
B1GBCFLL0037

TO A
CD LOADING
CIRCUIT
(CN1) ON
SCHEMATIC
DIAGRAM-8

TO C
PANEL CIRCUIT
(CN601) ON
SCHEMATIC
DIAGRAM-4

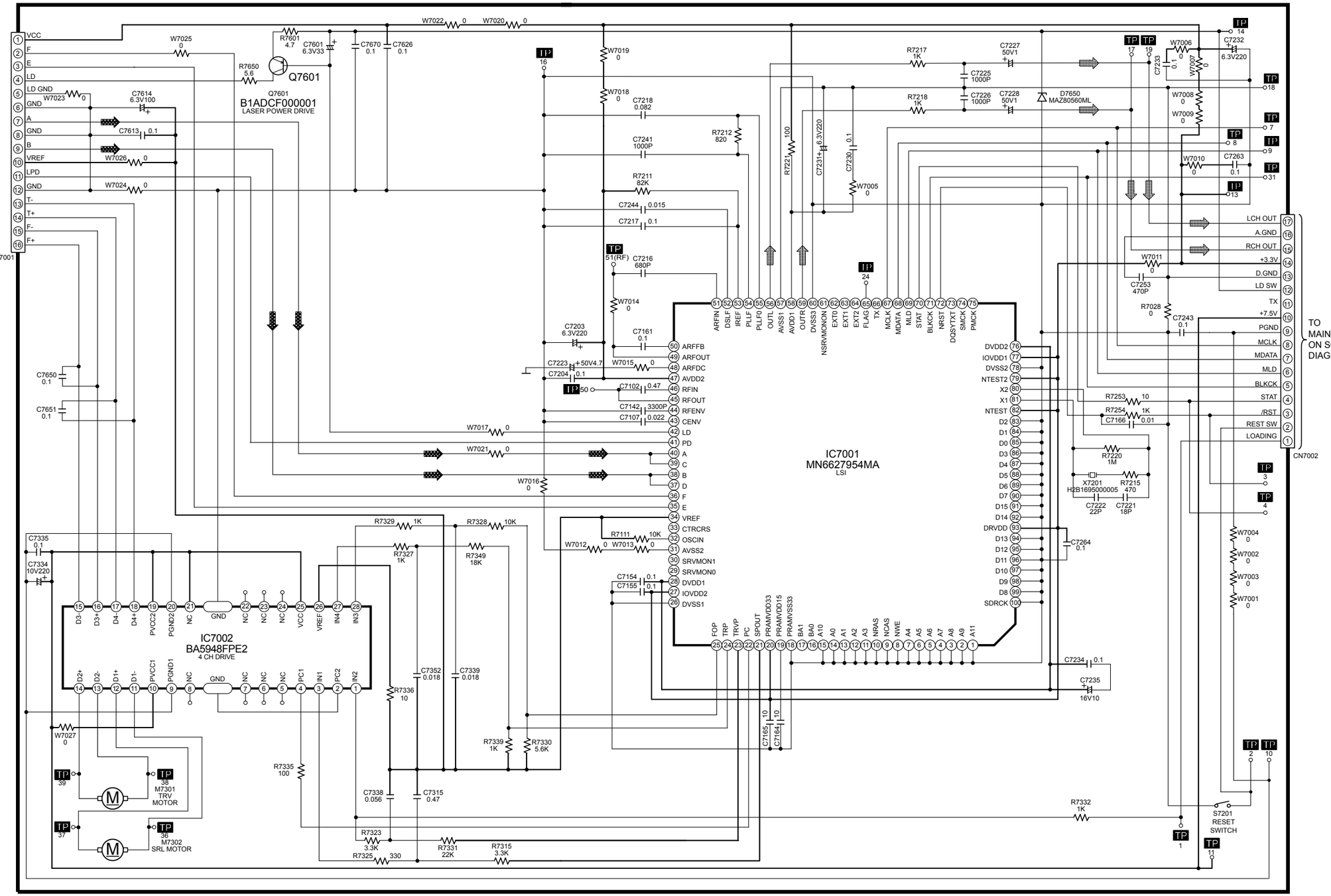
SCHEMATIC DIAGRAM - 1

OPTICAL PICKUP CIRCUIT



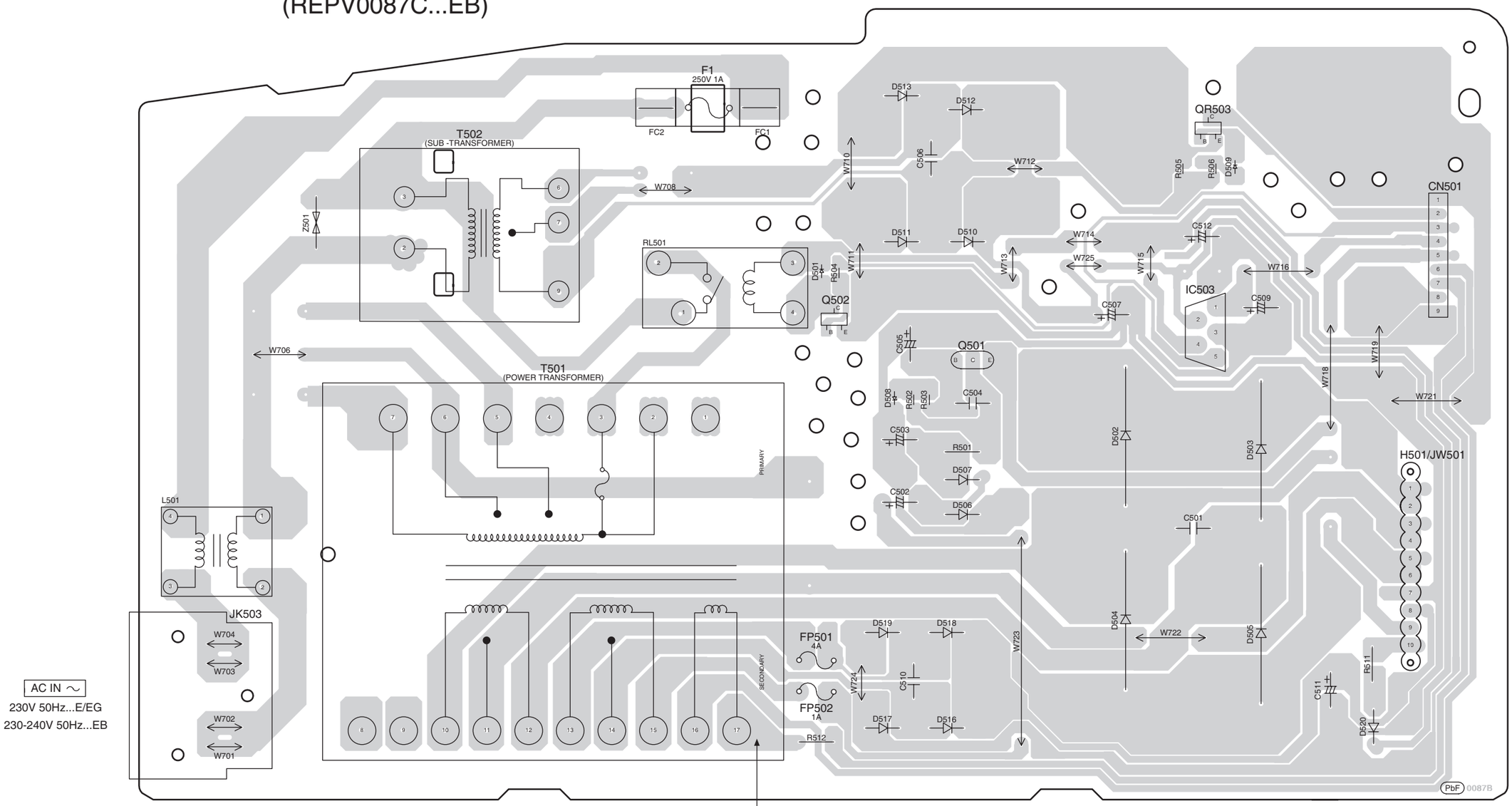
A CD SERVO CIRCUIT

—— : +B SIGNAL LINE : CD-DA SIGNAL LINE : CD SIGNAL LINE

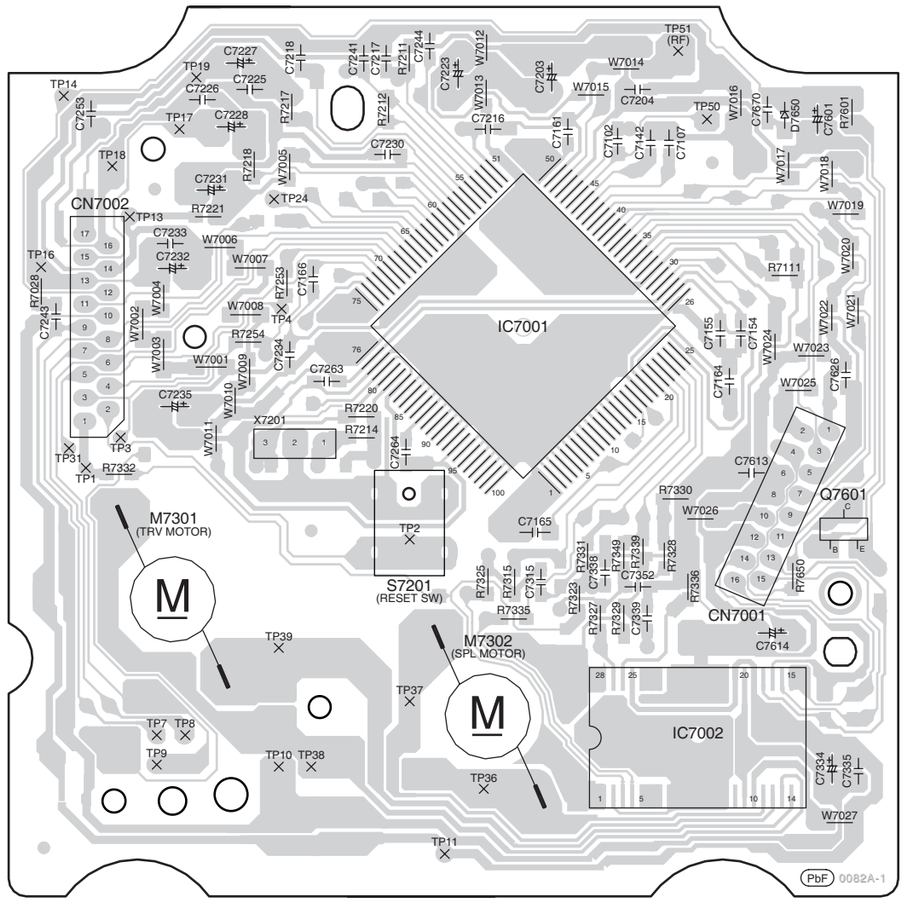


SA-PM53E/EG/EB CD SERVO CIRCUIT

H TRANSFORMER P.C.B (REPV0087B...E/EG)
(REPV0087C...EB)



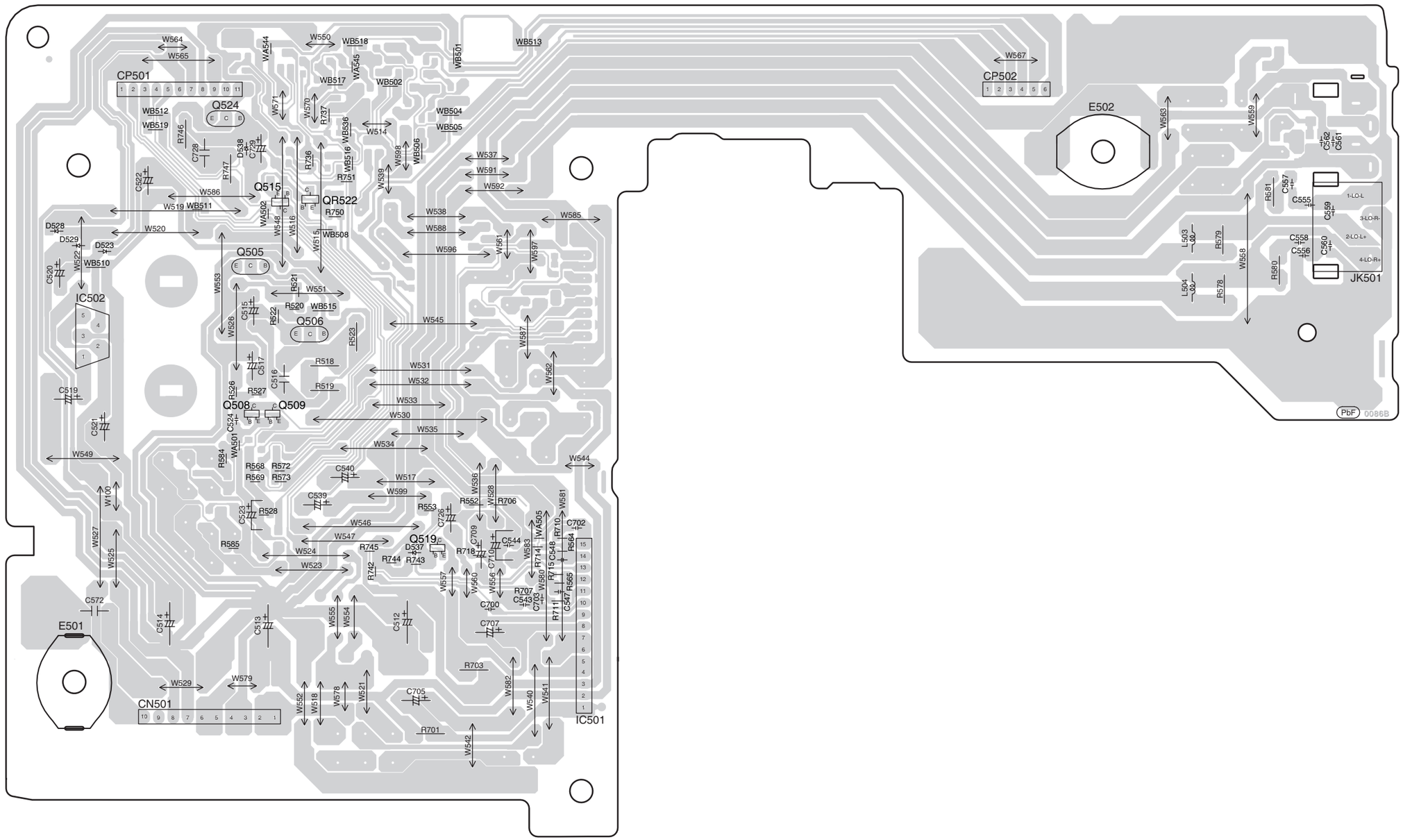
A CD SERVO P.C.B (REPV0082A)



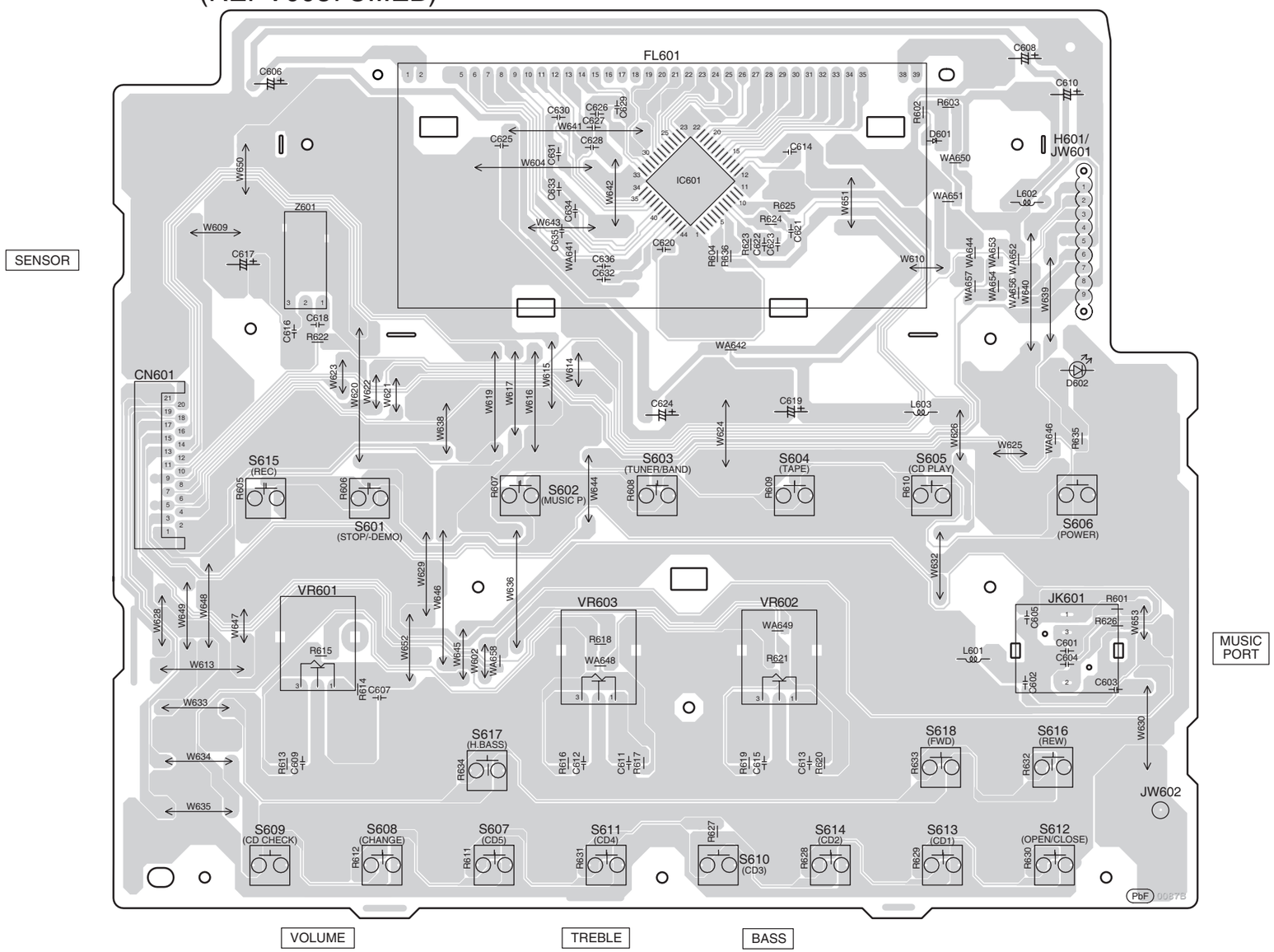
A B C D E F G H I J K L M N O P

1 2 3 4 5 6 7 8 9

G POWER P.C.B (REPV0086B)



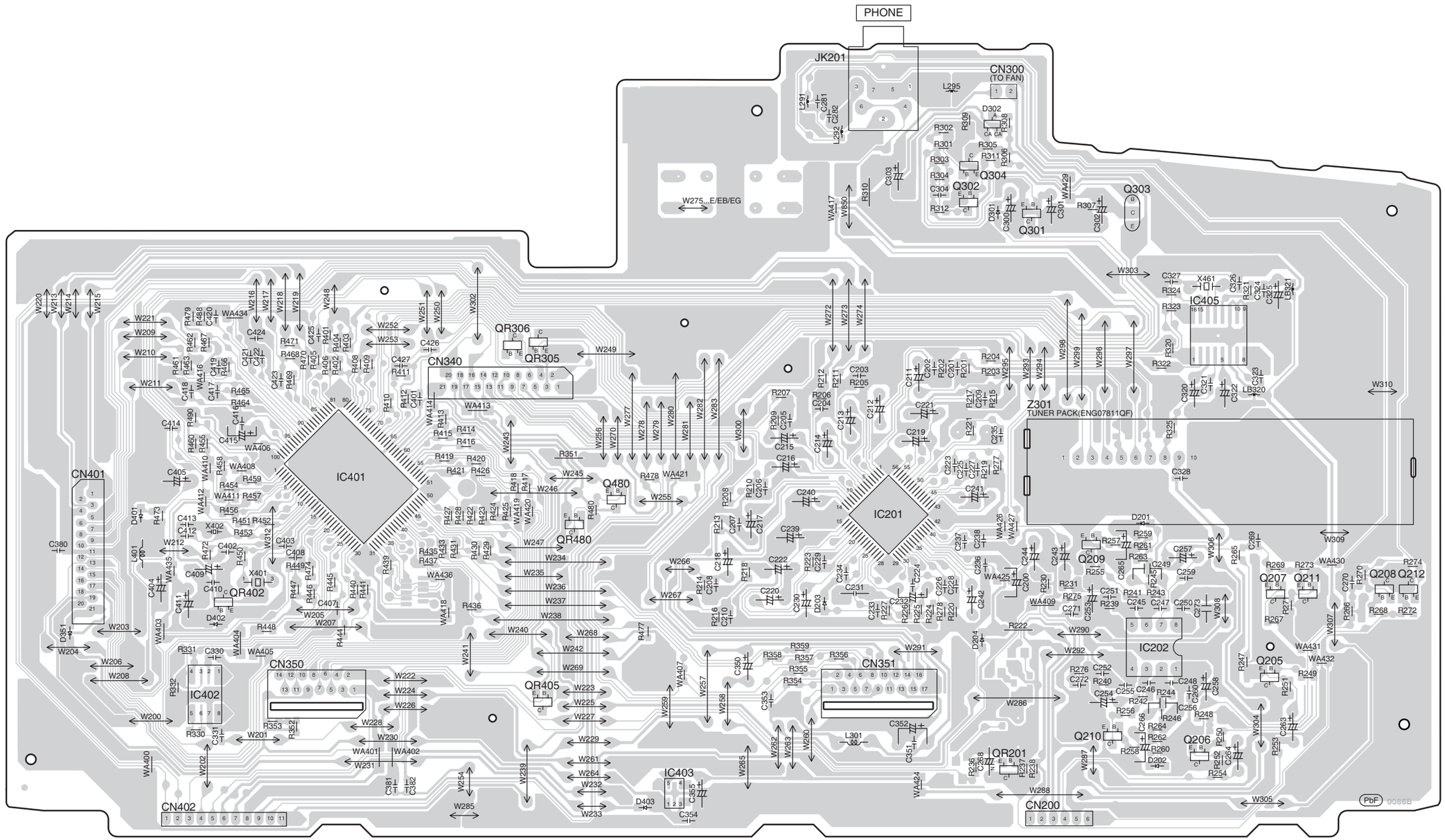
C PANEL P.C.B (REPV0087B...E/EG)
(REPV0087C...EB)



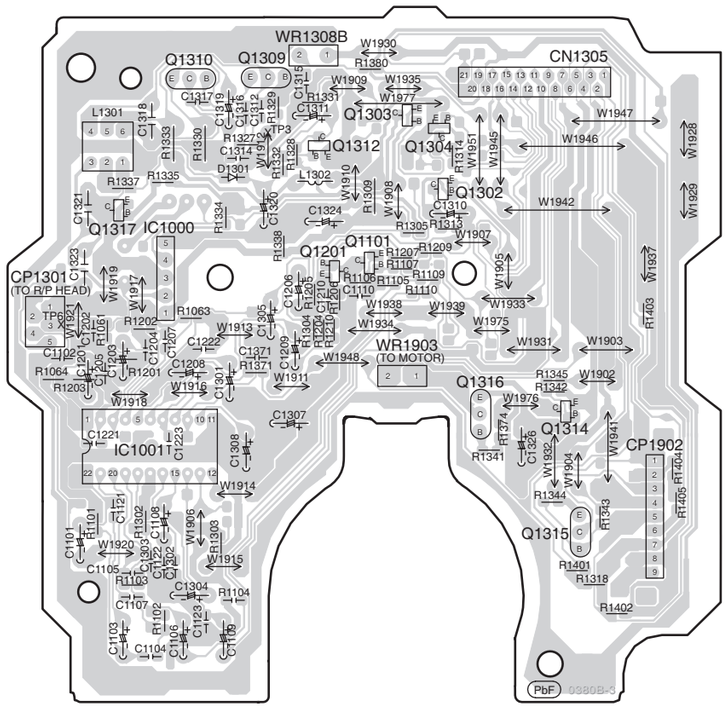
A B C D E F G H I J K L M N O P

1 2 3 4 5 6 7 8 9

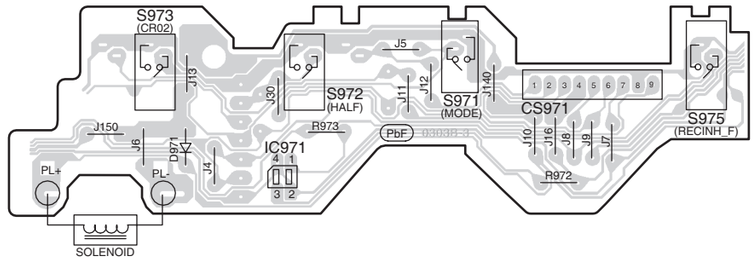
B MAIN P.C.B (REPV0086B)



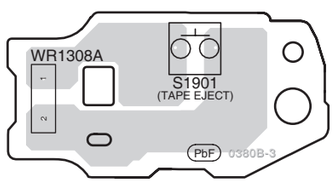
D DECK P.C.B (REPV0016B)



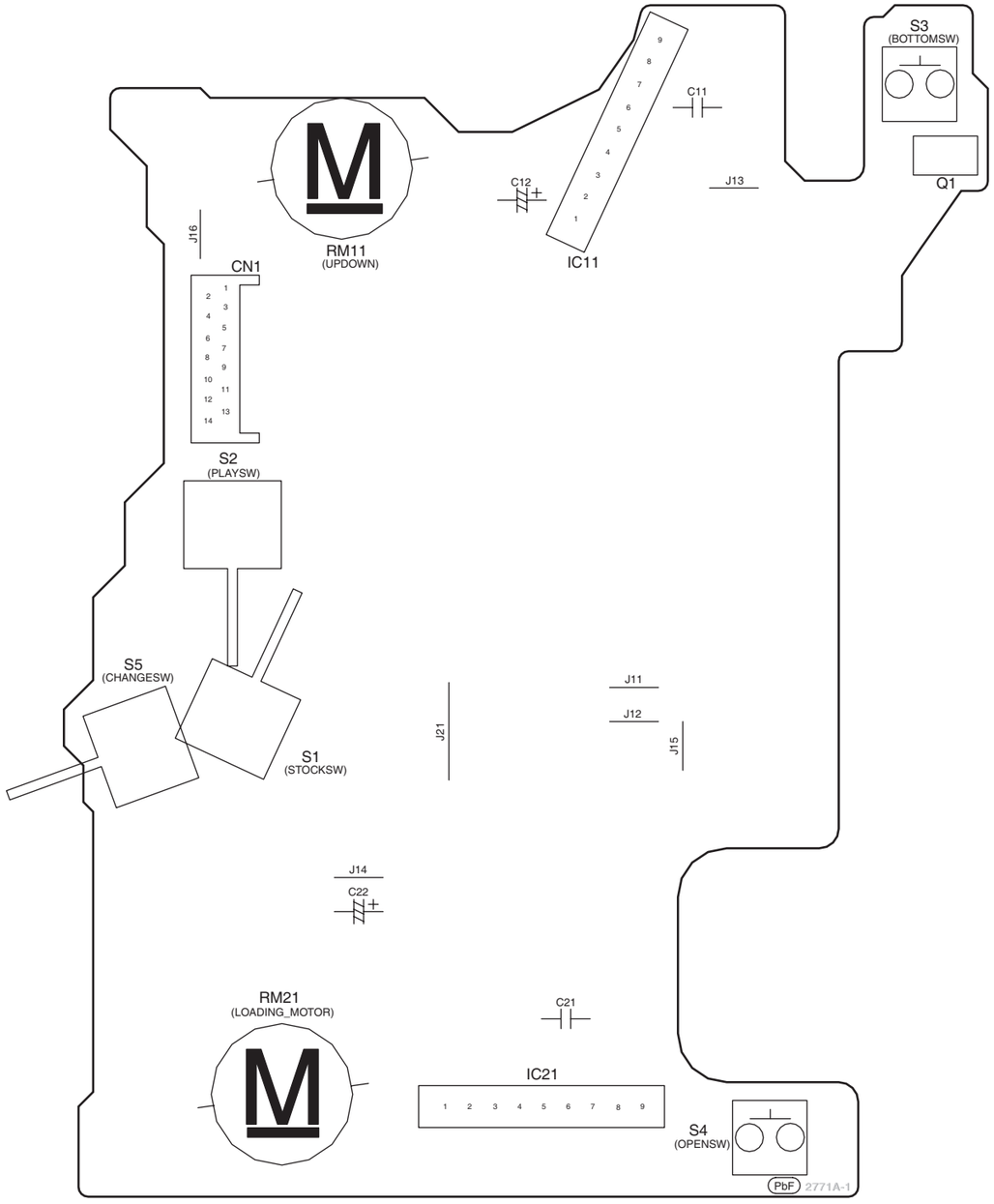
E DECK MECHANISM P.C.B (REPX0321H)



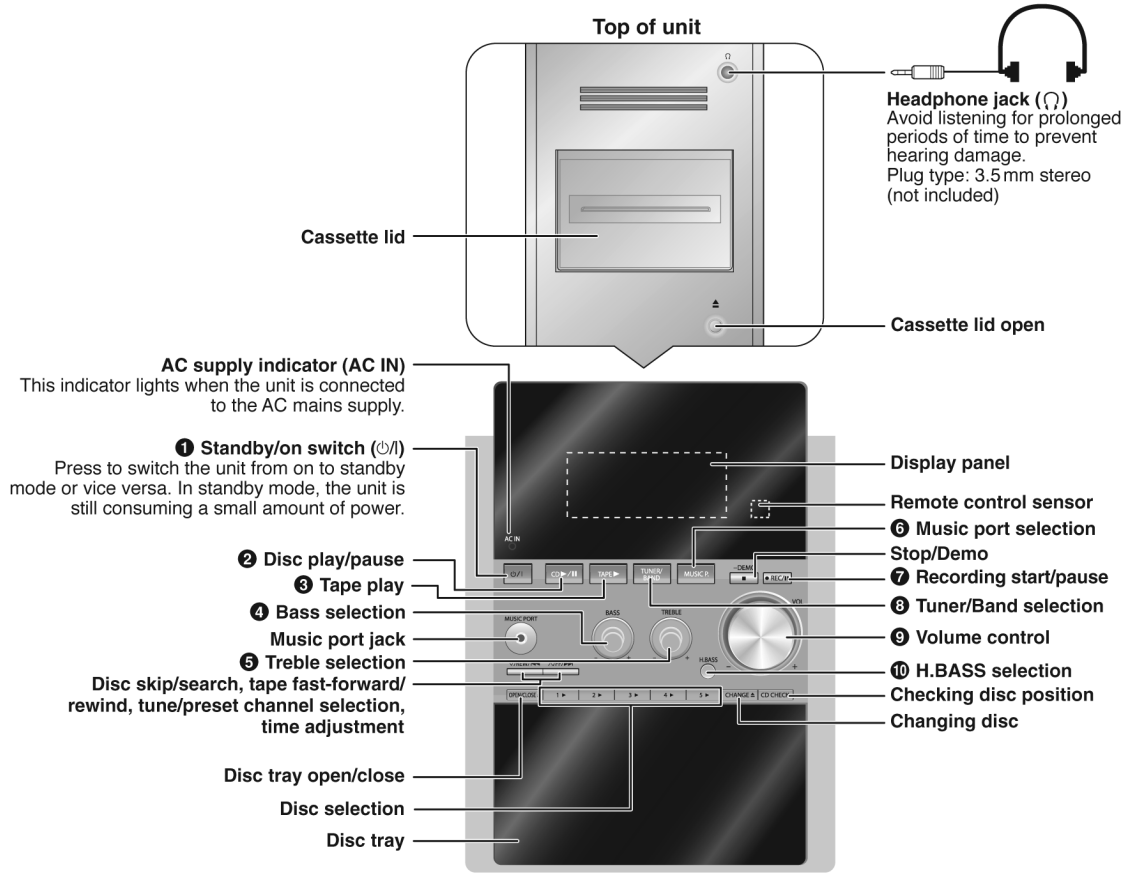
F TAPE EJECT P.C.B (REPV0016B)



I CD LOADING P.C.B (REP3569A)

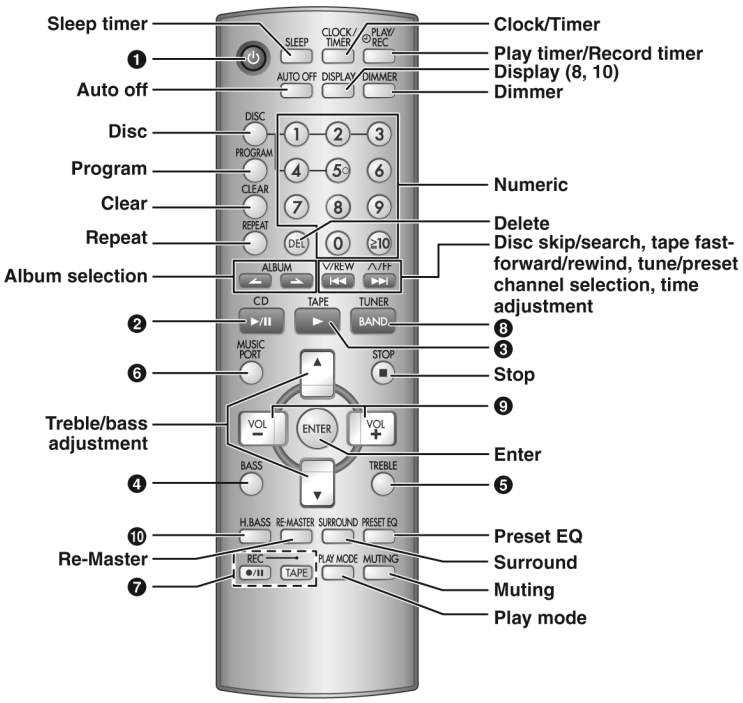


Main unit


Top of unit
Headphone jack (∩)
Avoid listening for prolonged periods of time to prevent hearing damage.
Plug type: 3.5 mm stereo (not included)
Cassette lid
Cassette lid open
AC supply indicator (AC IN)
This indicator lights when the unit is connected to the AC mains supply.
❶ Standby/on switch (⏻/I)
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
❷ Disc play/pause
❸ Tape play
❹ Bass selection
Music port jack
❺ Treble selection
Disc skip/search, tape fast-forward/ rewind, tune/preset channel selection, time adjustment
Disc tray open/close
Disc selection
Disc tray
Display panel
Remote control sensor
❻ Music port selection
Stop/Demo
❼ Recording start/pause
❽ Tuner/Band selection
❾ Volume control
❿ H.BASS selection
Checking disc position
Changing disc

Remote control

Buttons such as ❶ function the same as the controls on the main unit.



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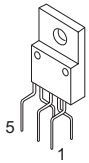
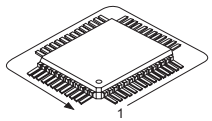
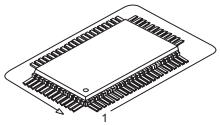
C0DAZYY00006



MN6627954MA (100P)
C1BB00001121 (56P)
C0HBB0000057 (44P)



C2CBYY000164 (100P)



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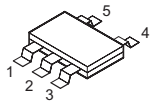
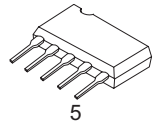


C1AA00000612 (5P)



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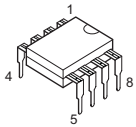

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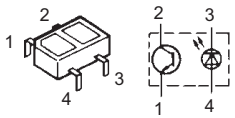

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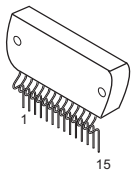

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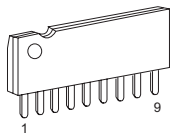
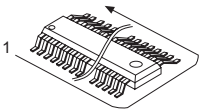
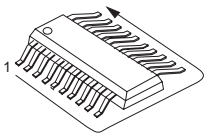


BA5948FPE2 (28P)
AN7326K (22P)



C1BB00000943 (16P)



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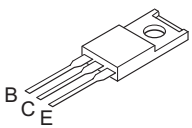

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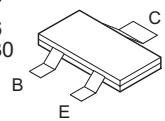

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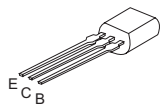

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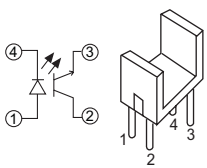

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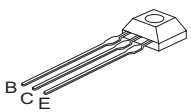

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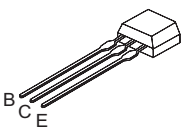

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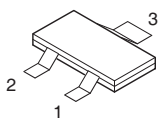

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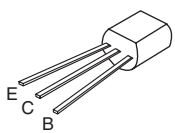

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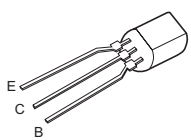

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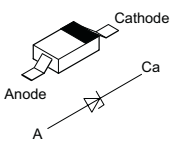

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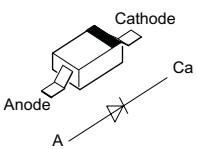

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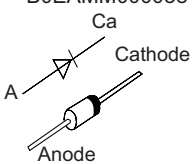

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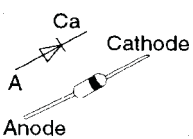

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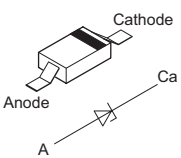

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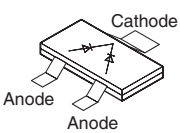

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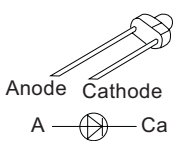
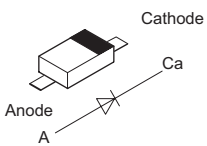


B0ACCK000005



- This unit can play MP3 files and CD-DA format audio CD-R/RWs that have been finalized.
- It may not be able to play some CD-R/RWs depending on the condition of the recording.
- Do not use irregularly shaped discs.
- Do not use discs with labels and stickers that are coming off or with adhesive exuding from under labels and stickers.
- Do not attach extra labels or stickers on the disc.
- Do not write anything on the disc.

CD

- This unit can access up to 99 tracks.
- Choose a disc with this mark:

COMPACT disc DIGITAL AUDIO

Using DualDiscs

The “CD” sides of DualDiscs do not meet the CD-DA standard so it may not be possible to play them on this unit.

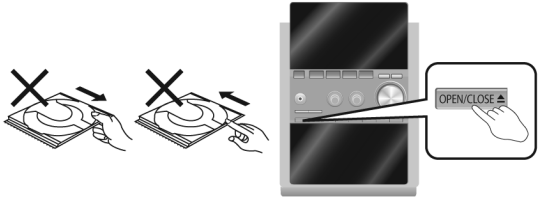
MP3

- Files are treated as tracks and folders are treated as albums.
- This unit can access up to 999 tracks, 255 albums and 20 sessions.
- Disc must conform to ISO9660 level 1 or 2 (except for extended formats).
- To play in a certain order, prefix the folder and file names with the 3-digit numbers in the order you want to play them.

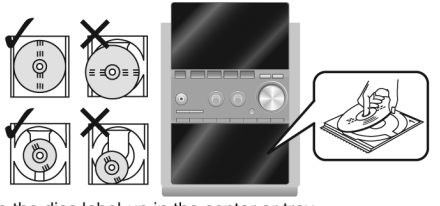
MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Not doing the following will cause damage to the unit.

- “**GOODBYE**” is displayed when the unit turns off. Remove the mains plug after this display disappears.



- Always press [OPEN/CLOSE ⏏] to insert or remove a disc.
- Do not push or pull out the tray by hand as this may cause an accident.



- Place the disc label-up in the center or tray.
- Insert only one disc into each tray.

OPTICAL PICKUP

PHOTO DETECTOR

E E D A D C B C F F

SEMICONDUCTOR LASER

+B

Q7601
SWITCH

LD_SW

IC7002
BA5948FPE2
4CH DRIVE

VREF 26 +B

FOCUS COIL
F+ F-
15 D3- 16 D3+ [CH3] LEVEL SHIFT IN3 28 FOP

TRACKING COIL
T+ T-
17 D4- 18 D4+ [CH4] LEVEL SHIFT IN4 27 TRP

M7301
TRAVERSE MOTOR
14 D2+ 13 D2- [CH2] LEVEL SHIFT IN2 1 TRVP
LOADING

M7302
SPINDLE MOTOR
12 D1+ 11 D1- [CH1] LEVEL SHIFT IN1 3 SPOUT

MUTE [CH1] PC1 4 PC

MUTE [CH2] PC2 2

35 E
40 A
39 C
38 B
37 D
36 F
41 PD
42 LD

71 BLKCK
66 TX
72 NRST
69 MLD
67 MCLK
68 MDATA
70 STAT

IC7001
MN6627954MA
LSI IC

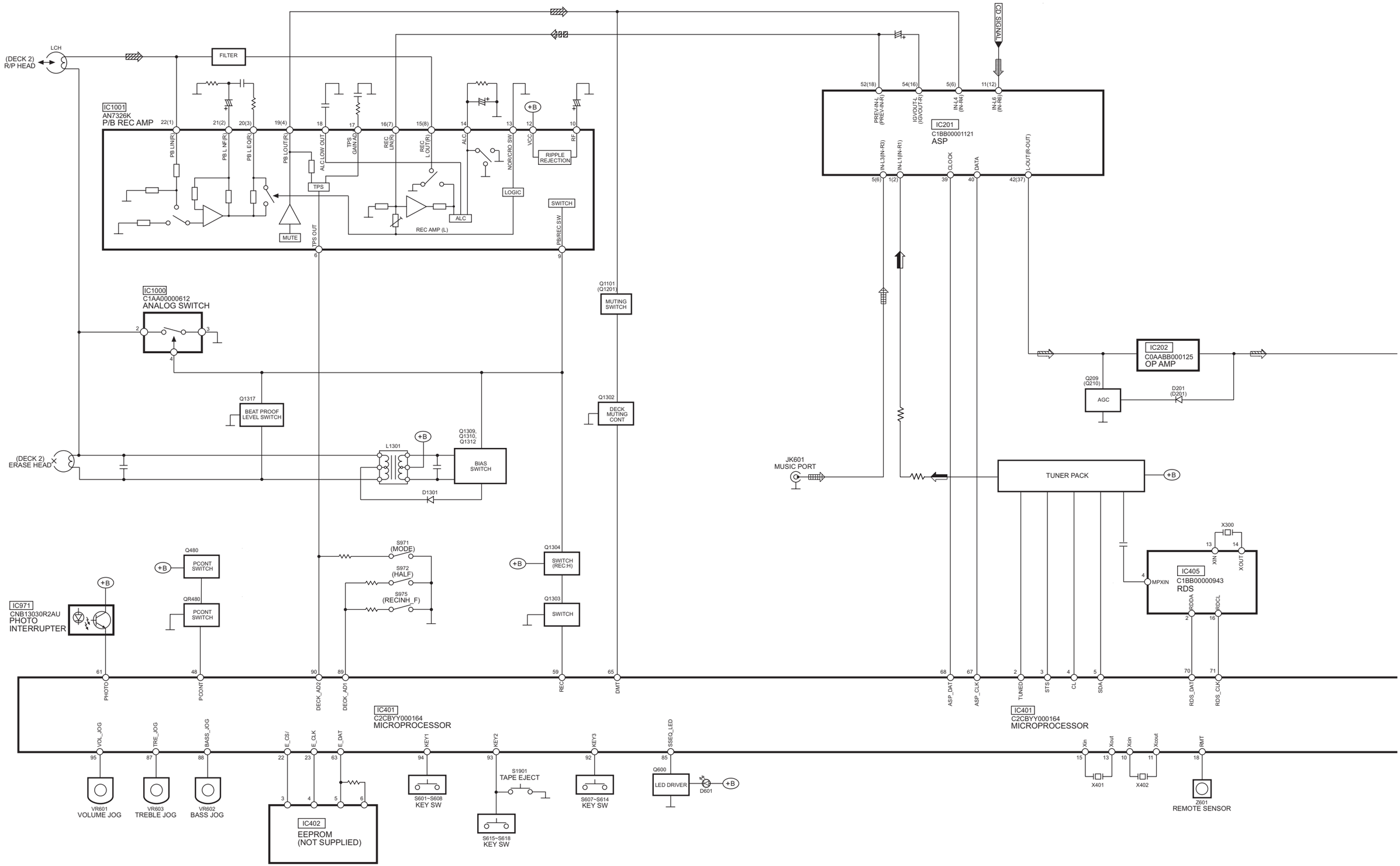
X1 81
X2 80
X7201

S7201
RESET SWITCH
RESTSW

OUTL 56 CD SIGNAL
OUTR 59 RCH

TO MAIN BLOCK (A)

SPOUT 21 SPOUT
PC 22 PC
TRVP 23 TRVP
TRP 24 TRP
FOP 25 FOP


LCH
(DECK 2)
R/P HEAD
FILTER
IC1001
AN7326K
P/B REC AMP
22(1)
21(2)
20(3)
19(4)
18
17
16(7)
15(8)
14
13
12
10
PB LIN(R)
PB L NF(R)
PB L EQ(R)
PB LOUT(R)
ALC LOW OUT
TPS GAIN ADJ
REC LIN(R)
REC L OUT(R)
ALC
NOR/CRO SW
VCC
RF
+B
RIPPLE REJECTION
TPS
LOGIC
SWITCH
ALC
REC AMP (L)
MUTE
TPS OUT
PB/REC SW
6
9
CD SIGNAL
52(18)
54(16)
5(6)
11(12)
PREV-IN-L (PREV-IN-R)
IGV/OUT-L (IGV/OUT-R)
IN-L4 (IN-R4)
IN-L6 (IN-R6)
IC201
C1BB00001121
ASP
IN-L3(IN-R3)
IN-L1(IN-R1)
CLOCK
DATA
L-OUT(R-OUT)
5(6)
1(2)
39
40
42(37)
IC1000
C1AA00000612
ANALOG SWITCH
2
3
4
Q1101
(Q1201)
MUTING SWITCH
IC202
C0AABB000125
OP AMP
Q209
(Q210)
AGC
D201
(D201)
Q1317
BEAT PROOF LEVEL SWITCH
Q1302
DECK MUTING CONT
(DECK 2)
ERASE HEAD
L1301
+B
Q1309,
Q1310,
Q1312
BIAS SWITCH
D1301
JK601
MUSIC PORT
TUNER PACK
+B
X300
13
14
XIN
XOUT
4
MPXIN
IC405
C1BB00000943
RDS
RDDA
RDCL
2
16
Q480
PCONT SWITCH
QR480
PCONT SWITCH
S971
(MODE)
S972
(HALF)
S975
(RECINH_F)
Q1304
SWITCH (REC:H)
Q1303
SWITCH
IC971
CNB13030R2AU
PHOTO
INTERRUPTER
+B
61
48
90
89
59
65
68
67
2
3
4
5
70
71
PHOTO
PCONT
DECK_AD2
DECK_AD1
REC
DMT
ASP_DAT
ASP_CLK
TUNED
STS
CL
SDA
RDS_DAT
RDS_CLK
IC401
C2CBYY000164
MICROPROCESSOR
IC401
C2CBYY000164
MICROPROCESSOR
VOL_JOG
TRE_JOG
BASS_JOG
E_CS/
E_CLK
E_DAT
KEY1
KEY2
KEY3
SSEQ_LED
95
87
88
22
23
63
94
93
92
85
Xin
Xout
Xcin
Xcout
RMT
15
13
10
11
18
VR601
VOLUME JOG
VR603
TREBLE JOG
VR602
BASS JOG
IC402
EEPROM
(NOT SUPPLIED)
3
4
5
6
S601~S608
KEY SW
S1901
TAPE EJECT
S615~S618
KEY SW
S607~S614
KEY SW
Q600
LED DRIVER
D601
+B
X401
X402
Z601
REMOTE SENSOR

Q205
(Q208)
MUTING
SWITCH

JK201
HEADPHONE
RCH

Q207,Q211
(Q208,Q212)
MUTING
CONTROL

QR201
MUTING
CONTROL
−B

QR405
MUTE
SWITCH
+B

D602
+B

FL 600
FL DISPLAY
FROM
TRANSFORMER

29,31 SEG01
14 SEG17
32 GRID01
42 GRID11
13,43 VDD
30 -VP
+B
−B
IC601
C0HBB0000057
FL DRIVER
FL_CS
FL_DATA
FL_CLK
9
7
8

RM11
UP/DOWN MOTOR
4 OUT1
2 OUT2
IC11
C0GAG0000007
UP/DOWN
MOTOR
DRIVER
F_IN
R_IN
7
9

RM21
LOADING MOTOR
4 OUT1
2 OUT2
IC21
C0GAG0000007
LOADING
MOTOR
DRIVER
F_IN
R_IN
7
9

TO CD MODULE
BLOCK
A
MDATA
STAT
MCLK
RESTSW
BLKCLK
NRST
MLD

78 HP_SW
40 MUTE_A
26 FL_CS
30 FL_DOUT
28 FL_CLK
58 M2_F
57 M2_R
56 M1_F
55 M1_R
42 MDATA_OUT
48 STATUS
39 MCLK
79 /RESTSW
19 BLKCLK
80 CD-RST
43 MLD

IC401
C2CBYY000164
MICROPROCESSOR

PLUNGER
MOTOR
76
77
QR305
SWITCH
QR310
MOTOR
SWITCH
Q1315
SWITCH
SWITCH
(MOTOR
SUPPLY)
D971
M
Q1314,Q1316

+B
IC403
C0DBZGC00067
3.3V REGULATOR IC

IC401
C2CBYY000164
MICROPROCESSOR
PLAY_SW
STOCK_SW
OPEN_SW
POS
BT_SW
CHANGE_SW
50
51
52
53
54
1
S2
PLAY
S1
STOCK
S4
OPEN
Q1
PHOTO COUPLER
+B
S3
BOTTOM
S5
CHANGE

SIGNAL LINES

: MAIN SIGNAL LINE
: FM/AM SIGNAL LINE
: TAPE PLAYBACK SIGNAL LINE
: TAPE RECORD SIGNAL LINE
: CD-DA SIGNAL LINE
: AUX SIGNAL LINE

( ) Indicates Pin No. of Right Channel

Note : Signal Lines are applicable to the Left Channel only.

IC501
C5ZAZ0000083
POWER HIC

IN/1 L(IN2 R) 11(15)
STBY 13
+VCC 3
-VCC 2
CH1-L(CH2-R) 5(7)
CH1+L(CH2+R) 4(6)
MONITOR 10

−B
+B

Q514(Q513)
LOW PASS FILTER
FILTER

Q508, Q509
DC DET SWITCH

JK501
SPEAKER

+B
D528,D529

Q519
STANDBY SWITCH
+B

QR522
DC DET SWITCH

FAN MOTOR
M
Q303,Q304
SWITCH

Q515
PCONT SWITCH

Q302,Q303
DCDET SWITCH
+B

+B
Q301
SWITCH
Q303
SWITCH
+B

Q502
PCONT SWITCH

D509
Q503
PCONT SWITCH

IC503
C0DAZYY00005
REGULATOR
+B
D514
D510~D513

T501
TO FL DISPLAY

IC502
C0DAZYY00006
REGULATOR
+B

Q501
-VP REGULATOR
−B
D507
FP502

T502
SUB TRANSFORMER

Q524
REGULATOR
+B

D516~D519
FP501

21 PCONT2
47 DCDET

IC401
C2CBYY000164
MICROPROCESSOR

HALT 20
PCONT2 21

RL501
Z501
F1
L501
JK501
AC INLET

POWER TRANSFORMER

Q505
VOLTAGE REGULATOR
+B

D502~D505

Q506
VOLTAGE REGULATOR
−B

E501